

THE AMERICAN RENAISSANCE

MR. A. V. PERKINS,  
47 WALGROVE PARK,  
DOBBS FERRY, N.Y.

12

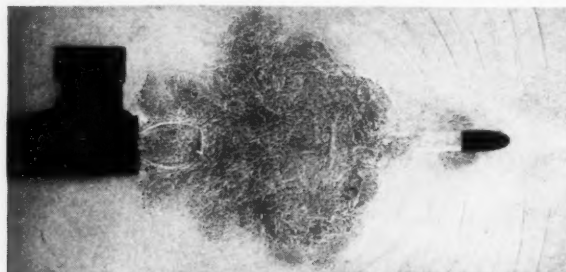




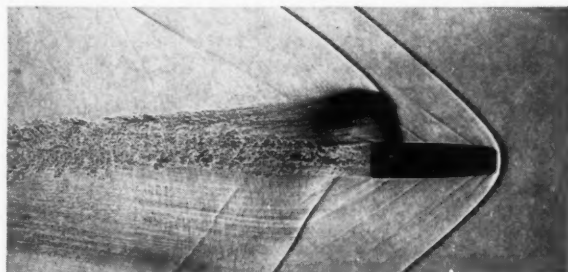
# POSSIBLES IN THE MAKING



**THROUGH THE LENSES** of this modern microscope, lead alloy used in making bullets is studied . . . modified to make Peters Tackhole, Filmkote and other bullets "gear" more perfectly with the rifling of your gun. Thus, Peters produces smoother bullet action in the barrel . . . and greater accuracy. Let's slip a Peters .22 into the chamber, pull the trigger and . . .



**SEE WHAT HAPPENS** as the bullet leaves the gun. Out it comes travelling over 1,200 feet a second. Click! goes the Sparkograph camera . . . and there is the bullet posing in mid-air, revealing the perfect performance of a Peters .22.



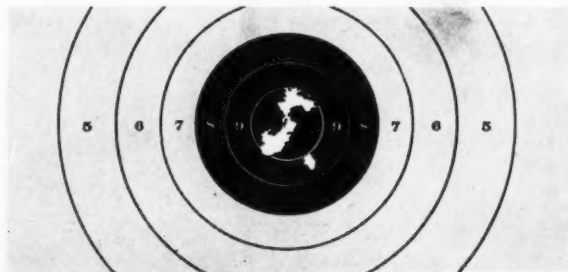
**NOW WE'LL TRY** an experimental .30'06 cartridge. The dark air disturbance above the rear of the bullet discloses a defect not visible to the naked eye. The cause is determined and corrected. Result . . . higher-accuracy ammunition.



**PETERS NEW BULLET-TESTER** makes bullets spin on their noses revealing internal defects. This old-fashioned bullet wobbles like a run-down top! Again Peters ballistic experts get the facts . . . produce more effective ammunition.

**AT ALL RANGES**, Peters ammunition gives consistently closer groupings. Try them in your next match.

*Tackhole and Filmkote are Peters Cartridge Division trade marks Reg. U. S. Pat. Off.*



**PERFECT TARGET**—A 10-shot possible by Sgt. Leo Allstot at 50 feet with a pistol. More proof of Peters higher-accuracy ammunition . . . the result of probing for facts and constant improvements made by Peters ballistic experts.

**PETERS** **DU PONT**  
PETERS CARTRIDGE DIVISION, Remington Arms Co., Inc., Bridgeport, Conn.  
MEMBER AMERICAN WILDLIFE INSTITUTE, "FOR A MORE ABUNDANT GAME SUPPLY"

**Don't Forget—National Hardware Week—May 9-14**



# WANTED!

## 2,000 New Members This Month

This month we are asking our friends to help enroll two thousand new members for the N. R. A. This is twice the number of new members usually received during April, but the goal can be reached if we all pull together. The additional members are needed in order to match the splendid progress record of last spring.

April is the ideal month to introduce fellow sportsmen to our sport. The outdoor shooting season is just around the corner and everyone is anxious to get outside again. It is likewise the opportune time to suggest N. R. A. membership to your sportsman friends. Thousands of Americans believe in the aims and purpose of our Association and would gladly become active members if the activities and benefits were explained to them.

Help us contact these prospective members. Tell them about the recent Cumming's proposal to register all firearms and show them how, without organized opposition led by your Association, this unworkable, unAmerican Bill would very probably have become a Federal Law . . . mention the *new* American Rifleman which is being improved each month in accordance with the suggestions of subscribers . . . explain the services of N. R. A. technical experts who are on the job to help members solve their personal shooting problems . . . remind your sportsman friends that a strong, united organization is the best guarantee that our traditionally American sport will be preserved.

The application below is for your convenience. If your prospective member won't sign on the dotted line, send us his name and address so we can follow up your efforts by letter.

National Rifle Association,  
816 Barr Building,  
Washington, D. C.

### GENTLEMEN:

I believe in the good work the N. R. A. is doing to make life more interesting for shooters and I am glad to help match our progressive record of last spring by endorsing another good American as an active member and subscriber.

His remittance of ☐ \$5.00 for 2 years, is enclosed. ☐ \$3.00 for 1 year. ☐ Send him a follow up letter.

Application endorsed and forwarded by

### THE NEW MEMBER

Name.....  
Name..... Age..... Address.....  
Address..... City..... State.....  
City..... State..... Status: ☐ Annual Member ☐ Life Member ☐ Club Officer





## ON HANDLOADING

Major Earl Naramore's new book—"Handloader's Manual" is everything its name implies—and then some. It is a most original work and has not been based upon previous writings or opinions. A book which can teach much about ammunition assembly and performance—one which will remain the standard work on its subject for a great many years. It contains 380 pages, devoted partly to cartridge components and partly to ammunition assembly, as per the following outline.

### CONTENTS

#### Foreword

#### BASIC ELEMENTS OF HANDLOADING.

#### Part One

##### Cartridge Components

1. THE CARTRIDGE CASE.
2. PRIMERS.
3. POWDER.
4. BULLETS.

#### Part Two

##### Ammunition Assembly

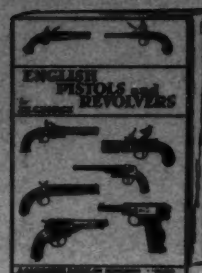
5. BULLET ALLOYS.
6. THE CASTING OF BULLETS.
7. BULLET LUBRICANTS.
8. BULLET SIZING AND LUBRICATION.
9. MECHANICAL POWDER MEASURES.
10. POWDER SCALES AND BALANCES.
11. HANDLOADING VERSUS BALLISTICS.
12. HANDLOADING OPERATIONS.
13. REVOLVER AMMUNITION.
14. LOADING FOR AUTOMATIC ARMS.
15. LOADING FOR EXTREME ACCURACY.

**Price \$3.50**

## Other Books and Manuals

British Textbook of Small Arms.....	\$5.00
Textbook of Firearms Identification—Hatcher .....	7.50
Textbook of Pistols and Revolvers—Hatcher .....	4.25
American Pistol Shooting—Fraser.....	5.00
22 Caliber Rifle Shooting—Landis ..	3.75
Wilderness Hunting and Wildcraft—Whelen .....	3.75
Modern Gunsmithing—Baker .....	4.50
A Rifleman Went to War—McBride.....	3.50
Book of the Springfield—Crossman.....	4.00
Military and Sporting Rifle Shooting—Crossman .....	4.50
Modern Shotguns and Loads—Askins ..	4.00
Yankee Arms Maker—Rohan .....	3.00
A Modern Military Dictionary—Garber .....	2.75
Big Game Rifles & Cartridges—Keith ..	1.50
The Woodchuck Hunter—Estey.....	1.50
Telescopic Rifle Sights—Whelen.....	1.50
Sixguns & Bullseyes—Reichenbach.....	1.50
Six Gun Cartridges & Loads—Keith ..	1.50
Firearms Bluing & Browning—Angier ..	2.50
Automatic Pistol Marksmanship—Reichenbach .....	1.50
Revolver Manual—Bair .....	.50

**Don't write—use coupon**



## ON ENGLISH PISTOLS

**ENGLISH PISTOLS AND REVOLVERS**, by J. N. George—contains authentic information of interest to the user of guns and the gun collector alike. It fills a gap which has long existed in the literature of firearms by supplying an accurate up-to-date history of English-made pistols and revolvers, dating from the seventeenth century. Combined with a detailed description of the many types of handguns produced by English makers is an historical account of the use of the pistol as a military, duelling, target and self-defense weapon.

Starting in with the distinctive "English lock" pistol of the time of Charles I, it carries the reader through each successive stage of handgun development, usage and improvement. All about the first firelocks, "screwed pistols," horse (holster) pistols, single, double, four-barrel and early repeating flintlocks, Queen Anne pistols, screw-barreled pistols, pocket, belt, carriage, duelling and military models. Next comes the development of the detonating system with its percussion pistols, pepperboxes and revolvers. Finally, the introduction of the metallic cartridge and perfection of the revolvers and self-loaders of today.

Here at last is a book replete with interesting and authentic notes relative to Joe Manton, Dura Egg, Nock, Mortimer, Elisha Collier, Col. Sam Colt and many others who stamped their ideas and influence upon the manufacturing practices and inventions of their times, a book which not only describes but illustrates each distinct type and development in English handguns.

**Price \$4.00**

National Rifle Association,  
316 Barr Building,  
Washington, D. C.

GENTLEMEN:

I enclose remittance of \$....., for which please send me the following books:

..... \$.....

Name.....

Address.....

City..... State.....



# THE MOST STARTLING ARRAY OF NEW GUN FEATURES EVER OFFERED

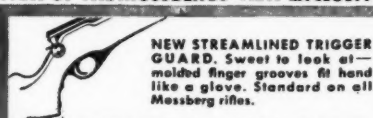


.22 Cal. Tubular  
Repeater 46B

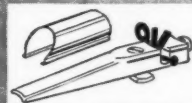
**\$13.85**  
less scope

Internal Adjustment  
Scope 5M4  
**\$5.45**

## A FEW OF THE MOSSBERG'S NEW EXCLUSIVES



**NEW STREAMLINED TRIGGER GUARD.** Sweet to look at—molded finger grooves fit hand like a glove. Standard on all Mossberg rifles.



**YOU WON'T LOOSE THESE.** Two posts, bead and aperture permanently mounted and interchangeable at will.



**A BRAND NEW REFINEMENT** in open rear sights—screw adjustments for both windage and elevation.



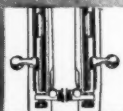
**YOU'VE ALWAYS WANTED THIS**—a flush take-down screw—works easily—adds to streamline effect.



**A DOUBLE RETICULE SCOPE.** Some shooters prefer cross hairs, some want a post. Here you have both. And at no extra cost!



**NEW! THE ONLY PEEP SIGHT THAT SWINGS OUT** so scope can be used in lowest position without removing sight. Selective aperture disc.



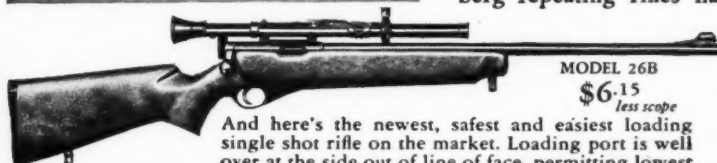
**MOSSBERG'S FAMOUS TRUE LEFT-HAND RIFLES.** "Master" actions, peep sights, cheek pieces and scope mounts completely reversed.

**New streamlining—new attached interchangeable front sight inserts—new, world's safest bolt action single shot—new scope sights—and the first automatic range finder telescope—all at prices within your reach**

A page doesn't *begin* to give space for even a brief description of the new rifles, scope sights and accessories we're offering this year. It has always been our policy to give "more for the money"—a rich man's shooting equipment at *down-to-earth* prices—but this year we've outdone ourselves. We've *never* offered so many improvements—and every one of them designed to increase your pleasure in shooting. You'll have to pardon what seems like "crowing" on our part and write it off to enthusiasm. But just look over what we have space to describe and you'll be enthusiastic, too.

For instance, the world's first Automatic Range Finder Scope Sight (below). You sight through it, make an adjustment and elevation is set automatically. You don't *guess* at distance. It's done *for* you. If you *know* the distance, set the instrument to the known yardage and you are automatically sighted in. With this new marvel you'll shoot better than ever in your life! . . . A typical Mossberg value at \$10.45.

New Mossberg rifles not shown are the beautiful clip repeater and clip target models with same new features as shown above. *All* Mossberg repeating rifles have the famous, exclusive "Master" action.



MODEL 26B

**\$6.15**  
less scope

(with plain front  
sight and without  
peep sight \$5.20.)

And here's the newest, safest and easiest loading single shot rifle on the market. Loading port is well over at the side out of line of face, permitting lowest possible position for side mount scope. New self-cocking action, 26" barrel, *plus all other new features shown on model 46B above.* This is *some* buy!

See your local Mossberg dealer for a real thrill—or send for our new catalogue and settle down to an evening of fascinating reading. You'll think then that we've shown great restraint in this ad!

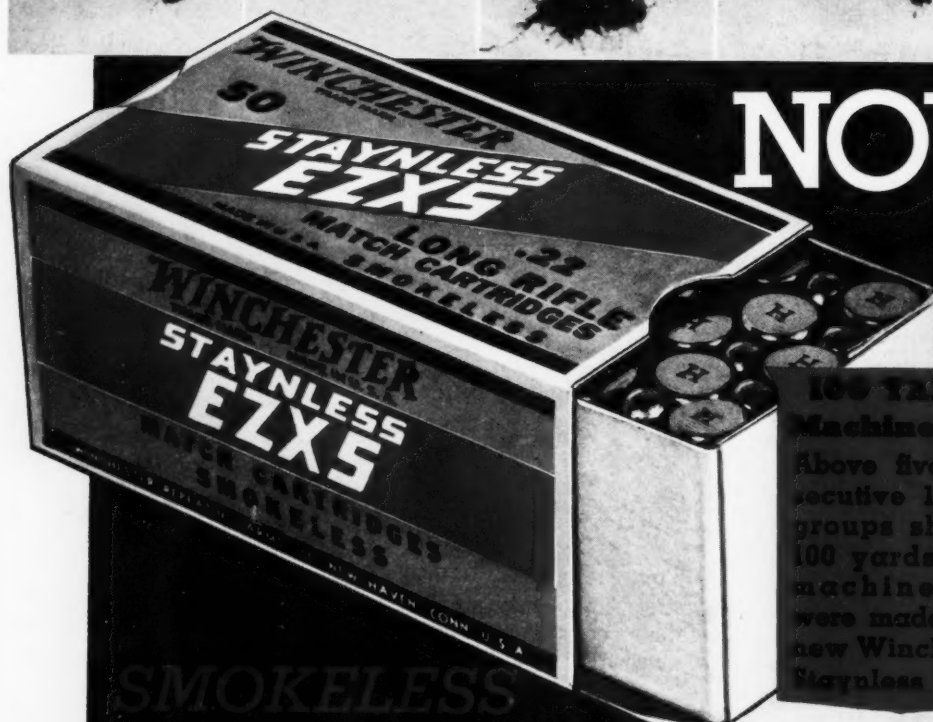
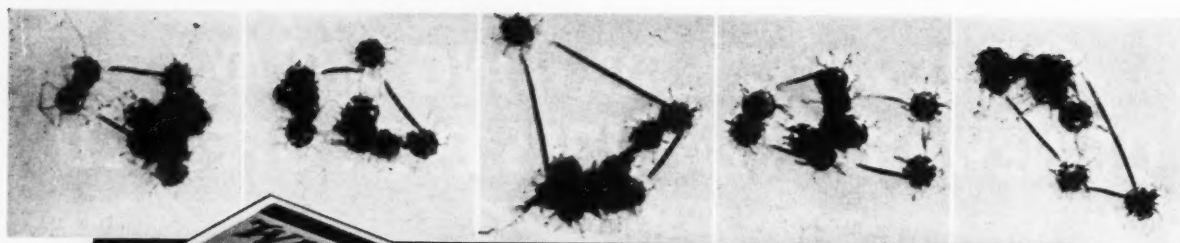
## O. F. MOSSBERG & SONS, INC.

Greene Street, New Haven, Conn.

O. F. MOSSBERG & SONS, INC.,  
2016 Greene Street, New Haven, Conn.  
Please rush me the new 1938 Mossberg Catalogue.

Name.....  
Street.....  
City..... State.....  
My firearms dealer is  
Name.....  
City..... State.....





# NOW

**100 YARDS**  
Machine Rest  
Above five consecutive 10-shot groups shot at 100 yards with machine rest were made with new Winchester Staynless EZXS

SMOKELESS  
MATCH .22s

## STAYNLESS EZXS

**S**MOKELESS .22 Long Rifle match cartridges of Winchester EZXS quality, and with the dependably clean, non-corrosive Winchester Staynless priming, are now at your service in the NEW Winchester Staynless EZXS. Their fine accuracy at all match ranges has been thoroughly proved—both in the extensive testing of Winchester New Model 52 Target Rifles and in test firing in Old Model 52s, and also in major competition. Used by Carl G. Johnson in winning the High-Over-All

and the Connecticut State Championship in the largest American small-bore tournament on record, the 1938 Connecticut State Gallery Matches.

New-profile greased bullet. New strong brass case. Best development of the dependable Winchester Staynless priming. . . . Order a supply of Winchester Staynless EZXS .22 Long Rifle Cartridges now, from your dealer. For further information, please write to Major J. W. Hession, Mgr., Shooting Promotion Department.

# WINCHESTER

TRADE MARK

WINCHESTER REPEATING ARMS CO., NEW HAVEN, CONN., U. S. A.



# The AMERICAN RIFLEMAN

VOL. 86, No. 4

APRIL, 1938

## NEXT MONTH

**W**E ARE hearing much about Poland these days, but not everyone realizes what fine hunting that country affords. In the May issue, that world traveler and noted big-game hunter, Frantz Rosenberg, will tell us of some of his experiences in hunting big game in the great Polish forests.

★ ★ ★

What constitutes a good picture? That is sometimes a question with amateur photographers—and a most important one. So in May Maurice Kellerman will undertake to tell us. We who have seen his article think Mr. Kellerman has done a pretty good job of telling.

★ ★ ★

That answer to the small-game shooter's prayer—the .22-3000 Lovell cartridge—has of late come in for much discussion and considerable experimentation. J. Bushnell Smith has found that by slightly modifying the original shape of this case, superior performance can be had, and Mr. Smith will tell us about it in the May issue.

★ ★ ★

There can hardly be a more important subject in connection with indoor gallery shooting than that of proper illumination of the range, but it is only within recent years that the technical skill of the trained illuminating engineer has been brought to bear upon the subject. In the May issue will appear a discussion of this important matter by Robert Cissell of the General Electric Company.

## Officers of THE NATIONAL RIFLE ASSOCIATION OF AMERICA

GUSTAVUS D. POPE  
*President*  
LT. COL. L. W. T. WALLER  
*First Vice-President*  
LT. COL. N. C. NASH, JR.  
*Second Vice-President*  
MAJ. GEN. M. A. RECKORD C. B. LISTER  
*Executive Vice-President Secretary-Treasurer*

## CONTENTS

### Cover Photo

Shows Colonel Townsend Whelen, one of the country's foremost rifle authorities, testing a rifle on his private range near Washington.

**Powder Smoke**..... 4

**Single-Shot Rifles**..... 5

*By P. H. MANLY*

**Progress Report of Firearms Legislation**..... 8

**Looking Ahead**..... 10

*By H. H. GOEBEL*

**Short Articles**..... 11 and 27

**The National Mid-Winter Championships**..... 12

*By F. M. HAKENJOS*

**Error of Aim With Scopes**..... 14

*By F. C. NESS*

**Now That You Have a Camera—(Part III)**..... 16

*By MAURICE KELLERMAN*

**Introductory Study of Automatic Firearms**..... 21

*By MELVIN M. JOHNSON, JR.*

**Elementary Metallurgy of Bullet Alloys**..... 28

*By N. W. GOODWIN*

**Sporting Arms and Ammunition Developments**..... 29

*By MONROE H. GOODE*

(Continued from March issue)

**Making Them Shoot**..... 30

*By M. A. COOPER*

**A Review of Recent Tournaments**..... 31

**Two Interesting Rifles**..... 33

**News Items**..... 39

**Dope Bag**..... 46

**Arms Chest**..... 49

Published the first of each month by the National Rifle Association of America. Barr Building, Washington, D. C.—C. B. Lister, *Managing Editor*; L. J. Hathaway, *Editor*; F. C. Ness, W. F. Shadel, *Associate Editors*; F. A. Moulton, *Advertising Manager*. 25c per copy. By subscription \$3.00 a year in U. S. and Possessions, and throughout North and South America; two years \$5.00; foreign \$3.60 a year; two years \$6.50. Entered as second-class matter, April 1, 1908, at the Post Office at Washington, D. C., under Act of March 3, 1879. Thirty days' notice required for change of address. Copyright, 1938, by the National Rifle Association of America.



# POWDER SMOKE

## The Committee Cooperates

IN this issue of THE RIFLEMAN we announce the dates of the National Matches as August 21st to September 10th. This is always the signal for greatly increased activity on all ranges throughout the country.

Each year it is necessary to patiently wait until the outdoor shooting season is upon us before the status of the National Matches for that year is definitely fixed. Not until the War Department Appropriation Bill has been passed by Congress and signed by the President can anyone be sure that the Matches will be held or on what scale they will be conducted.

The announcement of the final decision of our Federal Congress is of extreme importance because it alone determines the trend of the entire shooting year. Once the dates for the National Matches have been definitely placed in the "Coming Events" column, marksmen have a common objective upon which to set their sights. Present champions immediately plan the campaigns which they hope will enable them to retain their perches on the pinnacles of shooting success. Service and National Guard marksmen whose shooting ability has but recently been recognized by their own unit commanders then have an incentive to strive even harder to show the improvement necessary to earn them a place on a National Match Team. Civilian shooters who have tasted victory in local or regional tournaments look for the greener fields and the national recognition that accompanies a Perry win on the rifle or pistol range.

Everybody points for Camp Perry. It is not only the small-arms proving ground for the Ordnance Department, but it serves as a testing laboratory for arms, ammunition, and just plain gadgets, developed by private individuals. Camp Perry is more than a rifle and pistol tournament, it is a shooters' convention and an established American institution. The announcement of the dates annually acts as a hypodermic to the shooting game.

While it is important that the dates for the Matches be announced as early as possible, it is equally important that the scope of the Matches also be determined; that decision, however, rests with the Congress which determines the amount of the appropriation. The scope of the Matches is definitely determined by the money appropriated for this specific activity.

Provision is made for the National

Matches in the National Defense Act which stipulates that such Matches shall be conducted and that Congress is authorized to make an adequate appropriation for the purpose.

In keeping with this stipulation, the War Department annually includes in its budget estimate the sum requested by the National Board for the Promotion of Rifle Practice to provide for the matches and for the conduct of the office of the Director of Civilian Marksmanship during the fiscal year. The estimate must then be submitted to the Director of the Budget for approval or revision.

This year the Budget Bureau reduced the National Match item by \$153,000, and the Appropriation Bill was then sent to Congress for final action.

Fortunately for the shooters of America, the Committee before whom the Bill was sent for consideration is composed of seven men who realize the importance of rifle and pistol marksmanship. Here the National Match item was reconsidered and the Committee voted to restore the \$153,000 which the Budget Bureau had taken from the Bill. The Chairman of this forward-thinking Committee is Congressman J. Buell Snyder, of Pennsylvania. His associates on the Committee include D. Lane Powers, of New Jersey; John F. Dockweiler, of California; David D. Terry, of Arkansas; Ross Collins, of Mississippi; Albert J. Engel, of Michigan; and Joe Starnes, of Alabama.

As a result of the commendable action of this committee in reversing the earlier decision of the Budget Bureau, we may now expect the announcement of the National Matches for 1938 to state that they will be conducted in a manner befitting their importance in the National Defense plan, and with much the same program as obtained in 1937. Definite announcement cannot be made until the Bill has been passed by both Houses and signed by the President, but it is not now too early to give credit to the members of the committee whose interest and belief in the value of instruction in marksmanship has been instrumental in revising the War Department Appropriation Bill to make it again provide for a program of rifle and pistol matches of which the shooters—and the nation—may be proud.

The shooters of the country recognize and appreciate the consideration and cooperation of the Congressional Committee.



# THE AMERICAN RIFLEMAN

VOL. 86

APRIL, 1938

NO. 4

*I still have four different single-shot rifles.  
Top to bottom: Remington-Heppburn; Stevens;  
Winchester; Ballard*



*By P. H. Manly*

## SINGLE-SHOT RIFLES

ANYTHING about heavy-caliber single-shot rifles is rather old stuff now, though there are plenty of these old-timers in use yet, and many of these actions are being dolled up all the time and fitted with new barrels and modern-shaped stocks. There is only one heavy single-shot rifle manufactured in this country now, and the .22 Hornet is the largest shell it is made for; but there are surely a host of cheap, lightweight .22-caliber single-shot rifles made, especially in bolt action. Some of the large mail-order companies have these rifles made for them, with their own name or trade mark stamped on the guns instead of the manufacturer's name. As it costs but little more to put a box magazine on a bolt-action single-shot rifle, the same single-shot is offered as a repeater at but little advance in price.

The first rifle I owned was a single shot—the kind that had a hole under the front sight; and to load you first poured some loose powder into this hole, then shoved a round bullet in a greased patch down the hole with a stick until it rested on the powder at the bottom of said hole, and then put a little copper hickey on a short iron peg that the hammer rested upon. Then you were ready to shoot. In those days you carried the components along, and loaded to fit the noise you wished to hear or the kick you wanted to feel. My hunting grounds were usually several miles from where I

lived near town, and I often wondered why as a boy of fourteen I got so tired from an all-day hunt carrying that old muzzle-loader, until I was grown up and put the rifle on the scales—which registered over ten pounds! My load coming back was usually several bullets lighter than when I started—and maybe that was the reason I got so tired, as I have since decided that an empty game sack is the heaviest kind.

Since then I have owned quite a few different rifles, but mostly single-shots—Stevens, Remingtons, Winchester, and Ballards. Perhaps it was because the early inventors had no older models to improve on that the first breech-loaders were such weird affairs—weak, poorly designed actions with many parts that any mechanic now could design better, stronger, and far simpler. The Ballard was one of the first single-shots patented, and I can't imagine how an inventor thought up such a rig. Maybe only old hard-used Ballards got this far west, but all of them I ever saw were droopy-levered rattly iron works. Just a waste of good material and fine workmanship on a poor model. The lever was held up by friction contact only, and when the bearings wore a little, the lever hung down somewhere between the rest of the gun and the ground. The iron grip never felt comfortable to my hand, either. Fastening the stock on with a long bolt through it





made it solid, but if the stock was made of plain wood it split and checked from one end to the other. The lockwork on a Ballard was fine, though, when kept perfectly adjusted and repaired by a mechanic.

One of my early rifles was a .32-40 Stevens No. 44. This action may not be extra strong, but the barrels they put into them were surely accurate. I have a No. 44 yet, a .32-20, that I have owned and used for twenty-six years. The action has worn a little loose, but the lever pops up as good as ever. The No. 44½ action is much stronger, though. Both actions were hard to load right until one became accustomed to following the shell in with the thumb as the lever was closed; otherwise the shell rim caught on the firing-pin, and bent or broke the pin tip. But I would not care for another rifle that did not have the barrel tightly screwed into the receiver.

The old Remington rolling-block action always had my admiration for its simplicity. It was plenty strong for black-powder cartridges, and if made of proper materials it would hold high-pressure cartridges like the 7-mm. Spanish and the 8-mm. Lebel. Some might think the extractor on this model did not have enough leverage to pull tight shells, but the finger catch could always be struck with the edge of the hand, or this failing, the boot heel could be used to furnish plenty of additional extractive power. These old rolling-blocks were made for cartridges in killing sizes. Did you ever examine a .44-90 cartridge with a 470 or 520-grain paper-patched bullet? Well, it wouldn't hurt worse to be shot with a .30-'06. An old-timer used to tell me of a .50-caliber "Sea Otter Remington" that he used for a deer rifle, but it would kill deer so far away that he had to salt his

*The Remington-Hepburn is my favorite for vermin shooting*

bullets so the meat wouldn't be spoiled by the time he got to the deer!

The hammer on the rolling-block was heavy and a little slow compared with some other actions. If the block was not shut tight the hammer might not fall at all. I had a little trouble, too, with this heavy hammer-blow. It would crack brass primers, and I got gas in the face till I got wise and used tougher copper shotgun primers. The rolling-block I used most was a No. 2 size model in .25-20 caliber, with 28-inch octagon barrel. It retailed for \$7.50 then, and surely was a whole lot of well-finished gun for the money. The rolling-block was a fine action when a shooter used his ammunition loaded Schuetzen style, with the bullet projecting quite a way out of the uncrimped shell so that the bullet would be seated straight in the chamber and started into the rifling before the explosion. This style of cartridge could be seated better with a rolling-block than with any other single-shot action. This action could not be locked by the firing pin sticking in the primer—as can actions with vertical-sliding breech-blocks, or Peabodys, that depend on a firing-pin retractor. This is one of the main reasons the rolling-block was used so much as a military action. It was strong, simple, foolproof.

I had always wanted to try one of the Remington No. 3 side-lever single-shots, now generally called the Remington-Hepburn, probably because Hepburn patented it (October 7, 1879—the same patent date that is stamped on the older Winchester single-shots). But when I decided to get one





*An old-timer with a Winchester Single-Shot rifle*

they had not been manufactured for years, so I got an old one and had it relined to .32-20, for a rifle for use on small vermin and for all-around shooting; and it has been very satisfactory. It weighs ten pounds and holds its elevations the same no matter how held—offhand, rested on muzzle or forearm or alongside a tree, and has been a very consistent shooter. I have not moved the sights for nearly three years (a Lyman rear peep and a “holdover” front), and I have killed over 750 wheat squirrels and 20 hawks in the way of vermin in those three seasons, and still got the same group as before at 60 yards muzzle rest after that much use. It is the only rifle I have ever owned, though, that would “stay put” and do this.

The Remington-Hepburn has very visible locking lugs on the breech-block, and the rebounding hammer always rests on the safety notch, so there is never any worry where the hammer is unless you have set it at full cock. The hammer is low and the mainspring stiff, and it appears as if it should be a hard rifle to cock, but the hammer is easily pulled back by the ball of the thumb instead of the end of the thumb. The hammer and trigger are close together, which suits a short-fingered hand O. K.

The side lever to open the action is very convenient, and as it does not project below the trigger guard, the rifle can be carried or stored with the action open, without the lever catching or being in the way. About the only fault I have found with the Remington-Hepburn has been due to the rebounding hammer and the retractive spring on the firing

pin. The firing pin is not held against the primer during the pressure of the explosion, and with a high-pressure load the dent in the primer is apt to push back into the firing-pin hole, and lock the action some and clog the firing-pin hole with primer particles. The Remington No. 3 was made in a very wide variety of calibers, including .22 W. C. F., .25-20, .25-21, .32-40, and nearly all other center-fire cartridges up to .45-90, beside many of the heavy Sharps shells. It was later made with nickel-steel barrel adapted to high-pressure cartridges. The No. 3 in .40-90 Sharps straight caliber was once advertised as “the longest range rifle,” and regularly carried in stock by many dealers. With a 32-inch barrel this rifle weighed 11 pounds.

Many wonder at the peculiar shape of the stocks on these rifles, but this was the style of the times, for one thing. The Sharps “Old Reliable” has the same shaped stock with a low comb, but the drop is  $2\frac{1}{2}$ ” at the butt while the Remington has a 3-inch drop. These rifles were first designed for man-sized loads—and kicks, and when the rifle recoiled, the low comb rather went back and down from the shooter’s face instead of socking him on the jaw during the “retrogressive” movement.

The Winchester Single Shot rifle was strong and reliable, but the full-cock feature of the older model was mostly a nuisance. In only a very small proportion of shots is it an advantage to have the hammer left at full cock—most of the time the hammer has to be let down to safety again by hand; and the hammer is set so far ahead of the trigger that it takes an extra-long hand and fingers to let it down safely. The hammer of the Winchester Single Shot has several times

*(Continued on page 37)*



# Progress Report of Firearms Legislation

**T**HE material in this as in all other sections of *THE AMERICAN RIFLEMAN* is prepared several weeks in advance of publication of the magazine. During the intervening period it is more than likely that further action has been taken on some of the bills mentioned in this report by the various state legislatures. This report shows the standings of all bills as of March 7.

## Federal Bills

*Senate Bill No. 3*, presented by Senator Copeland and prescribing certain regulations for the control of the interstate shipment of firearms and ammunition by criminals, fugitives from justice and similar people, is still in the hands of the House Committee on Interstate and Foreign Commerce.

This Committee has devoted several weeks to the conduct of hearings on a bill to limit the length of freight trains. It is expected that they will be able to dispose of the freight car bill in the near future and will be able to take up *Senate Bill No. 3* shortly thereafter. It will be recalled that *Senate Bill No. 3* is designed to give Federal authorities some control over the use of firearms by ex-criminals and members of the underworld, but it does not affect the use of firearms by the average shooter. It provides for the issuance of Federal licenses to manufacturers and dealers. The manufacturer's fee is \$100.00, while the fee for dealers is \$1.00. This fee would be paid but once by any dealer or manufacturer. It is a logical plan which should help to reduce the crime rate in this country but at the same time would not affect the enjoyment of the sport of shooting by honest citizens.

*The Attorney General's proposal* has not yet been introduced in Congress. The Attorney General's original proposal was sent to the speaker of the House of Representatives on May 3, 1937. Although the Department of Justice has issued a number of press releases about this measure it has never been officially introduced, but still remains in the hands of the House Ways and Means Committee.

Except for the information contained in these press releases no other details of this proposal have been made available to the public. The measure is in the form of an amendment to the present National Firearms Act, extending the provisions of that act to cover *all types of firearms*. The tax on the transfer of weapons not already covered under the National Firearms Act would be only \$100 instead of the \$200 fee now charged for machine guns, sawed-off shotguns and similar distinctly underworld weapons. Under such an amendment it would be necessary for all firearms to be registered with the Collector of Internal Revenue. Before a gun could be sold or transferred in any manner it would be necessary to make a formal application with the Collector of Internal Revenue. This application would have to be accompanied by photographs, fingerprints and a \$1.00 fee.

It is obvious that this measure would impose an unnecessary handicap on the use of firearms by millions of American citizens. The chief argument advanced in favor of this general registration law is that it would "disarm the underworld." This is a very worthy objective but the Attorney General himself provides one proof that this objective would not be attained. In a recent issue of a popular magazine he points to the 38,061 miscellaneous weapons now registered under the present National Firearms Act and indicates that this registration provides the proper authorities with information about the location of these weapons.

According to this article, five sub-machine guns were recovered during the Dillinger investigation. One machine gun was recovered during the course of the investigation of the Kansas

City massacre. Two sub-machine guns were recovered in the apprehension of the Urschel kidnapers. Two .30-'06 machine guns were in the possession of the Brady gang when they met their Waterloo at Bangor, Maine. None of these machine guns had been registered, as required by law.

Under the provisions of the National Firearms Act the possession of these guns, unregistered, was punishable by five years in prison or a fine of \$2,000. The mere fact that the gangsters concerned also possessed other firearms (not now included under the National Firearms Act), would not have made them any more guilty under the Federal law than they already were.

The proposed amendment would not disarm the underworld but it would provide a lot of unnecessary red tape for honest citizens and sportsmen throughout the country. It should not under any conditions be enacted into law.

*House Bills Nos. 9473 and 9610*. Representative Luecke, of Michigan, has introduced two amendments to the National Firearms Act designed to exempt from the provisions of that act short double barrel shotguns of a type originally designed for the short range protection of hunters in the field.

*Bill H. R. 9473* would reduce the transfer tax on any gun with two attached barrels from which only a single discharge can be made from either barrel without manual reloading from \$200 to \$1.00.

*Bill H. R. 9610* provides that manufacturers and dealers of such arms would not be required to register with the Collector of Internal Revenue unless they also handled the other types of arms included under the act.

Both these bills have been referred to the House Ways and Means Committee.

## State Bills Proposed

### Georgia

*H. 53-X*, introduced by Representative Fitts, et al. on February 7, 1938. This is the Committee substitute for the general revenue bill which imposes a tax of ten per cent on the selling price of all sporting equipment selling for \$1.00 or more. In the case of firearms this tax would only apply to articles selling for \$10.00 or more.

### Kentucky

*S. 5*, introduced by Senator White on January 6, has been reported unfavorably. This bill provides in addition to the heavy penalties already imposed by the existing concealed weapon law in Kentucky that any person convicted for carrying concealed weapons shall forfeit said weapon to the Commonwealth and the sheriff of the county will sell the weapon.

While the concealed weapon laws of the state of Kentucky need revision, the Committee was quite correct in reporting this measure unfavorably. It is an undesirable piece of legislation.

*H. 214*, introduced January 25 by Representative Hale and referred to the Fish and Game Committee, would limit the capacity of shotguns used in hunting game or birds to three shells. This bill, which was reported favorably on February 3, conforms with the requirements set down for hunting migratory birds by the Federal Government. It is a logical step which has already been followed by a number of other state legislatures.

*H. 379*, introduced by Representative McConnell on February 9, has now been passed by the House and has been reported favorably by the Senate Committee. This is a general revision of the Game and Fish Code and includes in its provisions a regulation prohibiting the use of a gun larger than 10 gauge for



hunting wild birds within the state. It also limits the capacity of shotguns to three cartridges and provides a fine of from \$15.00 to \$100 for each offense.

### **Massachusetts**

Hearings were held by the Committee of Public Safety of the Massachusetts State Legislature on February 10 on three bills affecting the use of firearms: *No. H. 762*, introduced by Mr. Bentley, prohibiting the carrying of air rifles and BB. guns in certain instances; *H. 1198*, introduced by Mr. McLaughlin, providing for the fingerprinting of all applicants for permits to carry firearms, and *H. 1412*, introduced by Mr. Schofield, providing for the fingerprinting of applicants for a number of different types of permits, including permits to carry firearms.

Since the hearings were conducted on these three measures all three of them have been reported as being killed.

### **Mississippi**

*H. 268*, introduced by Representative Little, et al, January 20 and referred to the Conservation Committee, has been reported unfavorably by the Committee. This bill provided for a number of amendments to the present Game and Fish Code. Part of the bill set the hunting license fees at \$2.00 for resident hunters, \$15.00 for non-resident state hunter's license or \$5.00 for a seven day license or \$25.00 for a big game hunter's license. 25¢ is added to each license as a fee to the issuing officer.

*H. 657*, introduced by Representative McGraw; *H. 657*, introduced by Representative Sanlin, et al, and *S. 448*, introduced by Senator Allen, have all been referred to the Conservation Committee. They provide amendments to the present Game and Fish Code, including a provision in *H. 657* which prohibits the use of guns larger than 10 gauge and less than 26 inch barrels and capable of holding more than three shells at one loading.

### **New Jersey**

*S. 159*, introduced by Senator Hendrickson and referred to the Game and Fish Committee on February 21, regulates the killing of and prohibits the mutilation of the carcass of deer.

*A. 66* and *A. 90*, introduced by Representative Freund on January 24, have been referred to the Committee of Game and Fisheries. While both bills have been introduced as game protection measures, a strict interpretation of their provisions would in many cases make law breakers out of innocent shooters. Bill No. 66 regulates the possession of shotguns and rifles in vehicles, while Bill No. 90 prohibits the discharge of firearms within 400 feet of an occupied dwelling in the state.

### **New York**

*A. 409*, introduced by Assemblyman Parsons on January 18 and referred to the Conservation Committee, would permit the use of rifles not larger than .22 caliber rim fire for taking deer in counties where manner of taking is now restricted to the use of shotguns loaded with slugs or shot not smaller than buckshot.

*A. 1126*, introduced by Assemblyman Washburn on February 8 and reported favorably by the Committee on Codes on February 23, would amend the present Penal Code as it relates to the discharge of firearms by minors under the age of sixteen.

This bill would distinctly authorize and permit the discharge of firearms by persons from twelve to sixteen years of age shooting as members of a school, club, team or society on a range operated by that organization and under the supervision of an adult properly qualified by previous experience to serve as instructor.

This is a very excellent measure for it would permit boys and girls of school age to become familiar with the operation of firearms either in connection with their school work or as

an outside activity. Many boys of that age are naturally interested in firearms and they should be given the opportunity to learn more about guns under proper adult supervision. This is a good bill and should be enacted.

*A. 1382*, introduced by Assemblyman Conway on February 16, was passed by the Assembly on February 28 and is now under consideration by the Senate Committee of Codes.

It would permit the board of supervisors of New York City Council to increase the license fee for carrying and using dangerous weapons to \$1.50. New York City permit holders already pay \$1.50 every year, \$1.00 of which goes into the Police Pension Fund, and Senator Wicks has promised to amend it to make the bill apply only upstate.

*A. 1416*, introduced by Assemblyman Cariello on February 16 and referred to the Committee of Codes, would permit the issuance of a license to carry firearms to an applicant who had been convicted of a felony after a period of twenty-five years had elapsed since his conviction.

*A. 1923*, introduced by Assemblyman Middleton on March 1 and referred to the Committee of Codes, would again change the method of making an application for a permit to carry concealed weapons. It would provide for a standard form prepared by the State Correction Commissioner and would require with each original application the filing of three photographs, one of which would be filed in the Central Bureau of Identification.

Each year sees the introduction of one or more bills in the New York Legislature to alter the method of issuing permits to carry concealed weapons. Such changes in the administration are rarely an improvement. This bill is no exception.

### **South Carolina**

*H. 1454*, introduced by the Fish, Game and Forestry Committee and referred to the Ways and Means Committee, would direct the South Carolina Tax Commission to turn over to the State Game Department all funds collected by it under the license tax on the sale of cartridges and shells.

It seems only just that the money turned into the state by shooters for the privilege of hunting should be used for the purpose of game conservation and propagation within the state rather than being diverted to other purposes.

### **Virginia**

*H. 313*, introduced by Representative Stephens on February 9, was passed by the House on February 28. It provides that firearms found in the possession of any person connected with the unlawful manufacture, transportation or sale of alcoholic beverages shall be forfeited to the state and then may be used by persons having police power or may be destroyed.

This is a practical method of controlling the use of firearms by the underworld. It imposes a penalty on the use of firearms in an illegal manner and does not hinder the use of guns by law-abiding citizens.

*H. 357*, introduced by Representatives Perkins and Harris on February 14 and referred to the Committee on General Laws, would require a permit before purchasing ammunition of .32 caliber or larger.

This bill was obviously prepared by somebody who is not familiar with firearms and their use. While it would make it necessary for a man who wanted to shoot a .32-20 or a .38-40 rifle to obtain a permit before purchasing his ammunition, the man who was shooting the more powerful .257 or .30-'06 would not be required to obtain a permit. The pistol target shooter who wanted to increase his proficiency with the .38 revolver or the .45 automatic pistol would be dependent on the local clerk of the court for a permit to secure his ammunition. The law would not keep ammunition out of the hands of criminals and would not serve any practical purpose. Representative Perkins has now permitted this bill to die in Committee.



# Looking Ahead

By H. H. GOEBEL

"SEVERAL of our members have lost interest, and as a result we have curtailed membership."  
"We cannot reaffiliate." Etc., etc.

Such are the wails of the disheartened club secretary who has earnestly given his all in order that organized shooting might hold its place in the community as the top-ranking recreational and sports activity.

To be sure, there are untold reasons for such conditions, but nine times out of ten they boil down to just two:

1. Failure to provide a complete and attractive schedule of competition firing, with the necessary incentives;

2. Failure to build for the future by interesting and sponsoring a group of junior riflemen.

The average club secretary has about all he can do to "keep his office in order" and handle the many details that automatically fall to his lot. However, too frequently the "let George do

it" attitude creeps into the picture, and as a result the secretary is making a conscientious effort to shoulder every other officer's and member's responsibility. In time he becomes snowed under, with the result that everything suffers to some extent.

Every club has an elected set of officers, and each officer has his assigned responsibilities. Acting together, these officers constitute the Executive Committee. Spreading the club's responsibilities among these several officers materially lessens the load on any one, and enables all to give their best efforts to the conduct of their own particular duties. With such a set-up—all working together for the best interests of the club as a whole—the affairs of the club run smoothly. With four or five shoulders to the wheel, an attractive schedule can be both programmed and executed.

Regardless of who he may be, a shooter soon tires of coming to the range week after week with nothing in particular to shoot for. He doesn't get any real kick out of firing a few practice rounds by himself; he wants competition, and plenty of it. With a regular schedule of firing, including something in the way of incentives (which latter may be medals or merchandise prizes), the interest of all club members can, and will, be maintained. And furthermore, by occasionally running in a novelty match, turkey shoot, and the like, not only is interest stimulated, but, if a nominal entry fee is charged, the treasury will be built up and the club will be in a position to program a more extensive and attractive schedule of firing.

As the years pass by the average club suddenly finds itself in need of replacements—new blood—if its firing squad is to uphold its reputation in national competition. And how are these replacements and new blood to be provided? By building for the future—by enlisting and teaching the young people of today to become the riflemen of tomorrow. The development of these juniors now, will result in a lasting senior organization; for as the juniors become of eligible age they can be accepted into the senior group, thereby adding new life and interest.

Fortunately, a number of clubs have seen the light and are actively engaged in junior promotion. The results have in all cases been mutually beneficial. The new members have gained knowledge of and training in a worth-while sport, and parent organization has added some outstanding members, and the community as a whole has been benefited.

Outstanding among those who are building for the future is the Medford Rifle Club, of Medford, Oregon. Few if any other clubs can boast of a record that will equal or even approach that established by the Medford group. Yet it was only three months ago that the Medford Club decided to give the youngsters a break, and organized the Medford Junior Rifle Club!

This new junior organization has been most fortunate in receiving substantial assistance from several sources. The Medford Rifle Club has made its ranges and quarters available, while financial assistance has been given by the local American Legion Post and other citizens who recognize the value this training in marksmanship affords. Also, Mr. S. M. Tuttle, Secretary of the Medford Club, has taken on the added burden and responsibility of teaching these "riflemen of tomorrow," in which he is ably assisted by from four to six senior club members who are present on the range at every meeting.

The junior club enrollment now numbers nineteen members, and during the short period of three months these members have completed the requirements for 134 junior qualification awards ranging from Pro-Marksman to Distinguished Rifleman. In fact, the indoor record for four-position firing at 50 feet for the senior club is held by a member of the junior club

(Continued on page 38)

MEDFORD JUNIOR RIFLE CLUB - QUALIFICATION RECORD

Member	BASIC	EXPERT	RIFLEMAN	Dist. Rifleman	American Rifleman	Member
Jack Denison	★	★	★	★	★	
Harbert Tuttle	★	★	★	★	★	
Dick Finch	★	★	★	★	★	
Kenneth Hedberg	★	★	★	★	★	
Robert Hubbard	★	★	★	★	★	
Herbert Goldsmith	★	★	★	★	★	
Bill Holmquist	★	★	★	★	★	
David Luman	★	★	★	★	★	
Leslie Stinson	★	★	★	★	★	
John Spaulding	★	★	★	★	★	
John Moffat	★	★	★	★	★	
Gilbert Turley	★	★	★	★	★	
Wesley Tuttle	★	★	★	★	★	
Harbert Tuttle	★	★	★	★	★	★
Shelley Tuttle	★	★	★	★	★	★
Calvin Whitehead	★	★	★	★	★	
Paul Whitehead	★	★	★	★	★	

Upper: Chart showing qualification progress of each member  
Lower: Scores are posted as they are fired

NO.	NAME	COACH	RATING	1	2	3	4	5	6	7
1-1	Rena	Wald	1st	48	44	45	42	46	47	46
1-2	Leiter	Wald	1st	48	44	45	42	46	47	46
1-4	Rab	Wald	1st	48	44	45	42	46	47	46
2-1	David	Wald	1st	48	44	45	42	46	47	46
2-1	Paul	Wald	1st	48	44	45	42	46	47	46
3-1	Wick	Wald	1st	48	44	45	42	46	47	46
4	Johnny	Wald	1st	48	44	45	42	46	47	46
5	Jack	Wald	1st	48	44	45	42	46	47	46
3-1	Calvin	Wald	1st	48	44	45	42	46	47	46
3	Jack	Wald	1st	48	44	45	42	46	47	46
4	Jack	Wald	1st	48	44	45	42	46	47	46
6	Kenneth	Wald	1st	48	44	45	42	46	47	46



# Looking Through the Rear Sight

By WILLIAM G. F. ANDERSON

**T**HREE or four years ago I was much troubled with a flattening of my rear sight aperture in small bore indoor shooting under artificial light, especially in the sitting and kneeling positions. With a rifle perfectly sighted in the prone position, I would get wandering groups sitting, accompanied by the flattened aperture.

After much time spent experimenting with sight combinations I finally determined the reason for the flattening of the aperture, which immediately showed the way to stop the groups from wandering.

I have explained this to many shooters, among them Marine team men, and none of them had heard of it before. As it has helped others I offer it here at the risk of being shown that I have made a "discovery" already known and elsewhere described. The optical-physical explanation is left for someone qualified in that field and this discussion will be confined to the effect and the remedy.

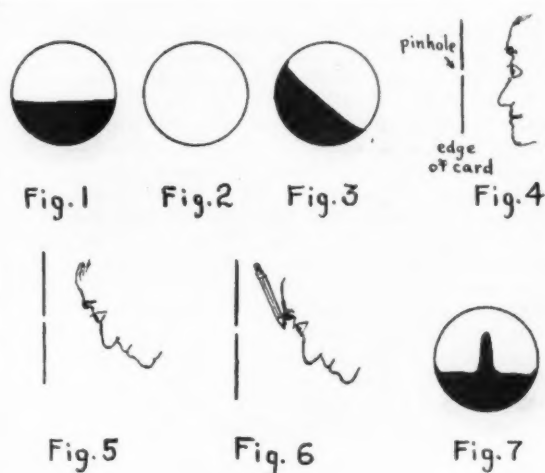
No doubt every shooter has experienced having his rear sight look more or less similar to Figure 1, instead of looking round, as it actually is, as in Figure 2. Now, having met the condition, what makes it look that way? Well, the black portion of Figure 1 is an inverted image of your brow, and the amount of flattening depends upon how far forward you incline your head. And if you tip your head to the right as well as forward the sight will look like Figure 3. Your shots will be at about 8 o'clock and will be probably 8's or 9's, maybe nippers, depending upon the amount and direction of inclination for each shot.

The above statements, when first made, always have drawn a look of disbelief, but they are easily proven to the disbeliever's satisfaction.

Take a card and punch a pinhole in it about the size of your rear aperture. Hold it an inch or two from your eye and look at a brightly illuminated surface. If held squarely in front of your face as in Figure 4 you will see a perfectly round hole. Now tip your head as shown in Figure 5 and the hole will look like Figure 1. Tip your head sideways and you will have Figure 3.

For the final step of the proof, hold a match stick, wire, or pencil against your eyebrow while looking through the aperture at an angle (Figure 6), and move it into the line of sight and then move it up and down. You will see what looks like Figure 7, which shows that whatever is cut off the bottom of your aperture is done by an inverted image of your forehead. And your shots will be in the direction of the blanked-off portion.

The remedy is immediately apparent. Sitting or kneeling, take up your sling a little more, straighten out your backbone and sit more erect, facing the sight squarely for a truly circular aperture. Your wandering groups will wander back to center and stay there. That is, if your position lines your rifle on your target without strain, if you breathe properly, if you hold 'em, if you squeeze 'em, if you don't flinch. In other words, this article deals only with the sight picture.



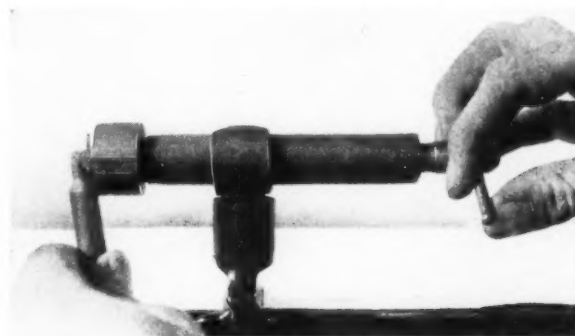
## A Graphite-Wad Strip-Maker

By ALLYN H. TEDMON

**W**HEN H. A. Donaldson some time ago mentioned the use of graphite wads in ammunition, it was a new tune to most ears. However, it was an old, old story to the hardened riflemen of years ago, and it may be of interest to our readers to see a picture of one of the original graphite-wad strip-makers. The one I illustrate was made by that old master, A. W. Peterson, of Denver, Colorado, years ago. I happened to be nosing around his shop recently, and discovered it. The barrel is a bronze casting, and after being filled with the wad-strip material, the plunger is screwed up against the grease the same as with any present-day grease gun.

To produce the strip necessary for the wad, the outlet of the barrel is a flat orifice, over which projects a sort of ledge or plate. The way the tool is worked is this: First the grease is forced out in a nice thin sheet, just under the projecting plate. Then the mouth of the case is pushed up through the strip of grease and against the plate, and presto, there is a graphite wad in the mouth of the case! The photo shows how the case is

held, the plunger being turned in as soon as the case is removed, to force out grease for the next wad. It works well; and—well, graphite wads aren't so new as some think they are.





# The National Mid-Winter Championships

By F. M. HAKENJOS

**F**OUR tense figures stood on each end of the 200-yard firing line, intently peering at the distant butts over which the targets would soon appear. Each man held in his hands a heavy-barreled small bore match rifle which had already been fouled but was now unloaded. Bolts were open and loading blocks lay on the ground with ammunition in alternate holes to speed up the loading process. Range Officer Moulton had just given the signal, "Ready" which was to introduce a new game to American small bore shooters. The Infantry Match, a special feature of the National Mid-Winter Championships, was about to begin.

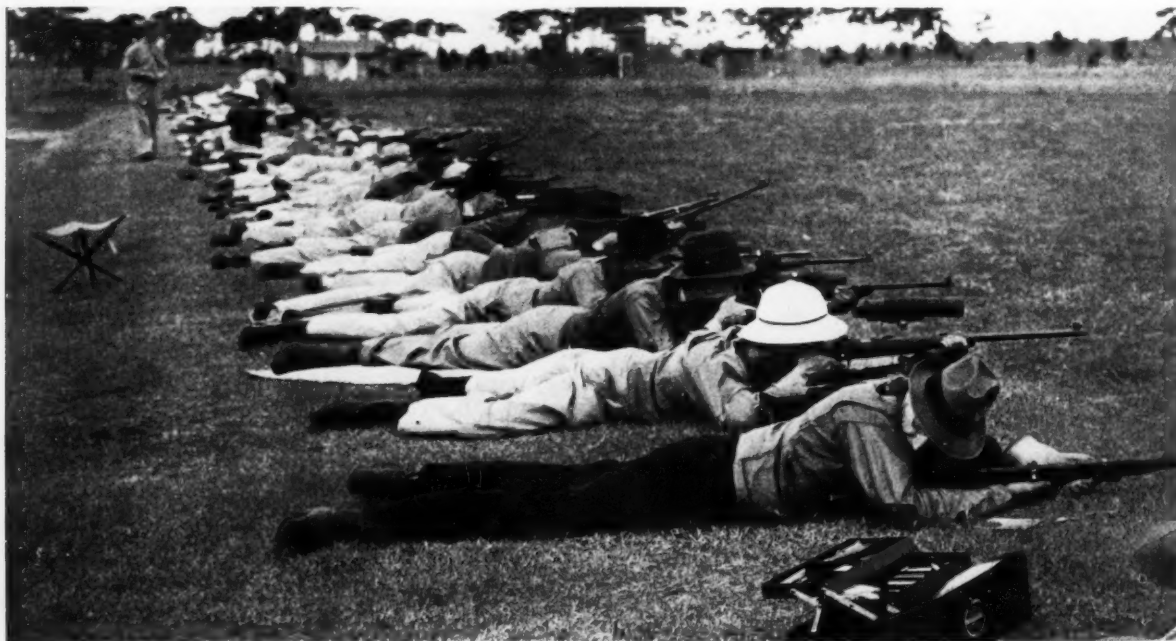
Each shooter on the two opposing teams leaped into the prone position as soon as he caught sight of the targets timidly peeping from their hiding place and he fervently hoped that he had guessed correctly when setting his sights from the previous day's dope. At the end of the first volley every target stayed in place; nobody had judged conditions sufficiently correct to score a ten on his first shot. But after his second shot the target of Harry Miller of the Winter Haven team was pulled out of sight behind the butts. Miller shifted his position to swing his rifle towards the target of Kenny Recker's target. One shot from Miller and Recker's target followed Miller's into the pit and both men swung over to assist their teammates who were vainly aiming all over the lot in the manner of Major Hession's now famous stuttering dove hunter. But Miller was now confident that he had the range and he was carefully deliberate while he fired the two more shots that accounted for the balance of his team's targets and made Winter Haven the winner of the first elimination match in just one minute and thirty seconds.

The semi-final round proved that four men can shoot faster than one man. Miller had the range, but so did the entire Sunshine Rifle Club team and the Winter Haven aggregation was counted out just forty-seven seconds after the starting signal had been given. The other semi-finals brought together the

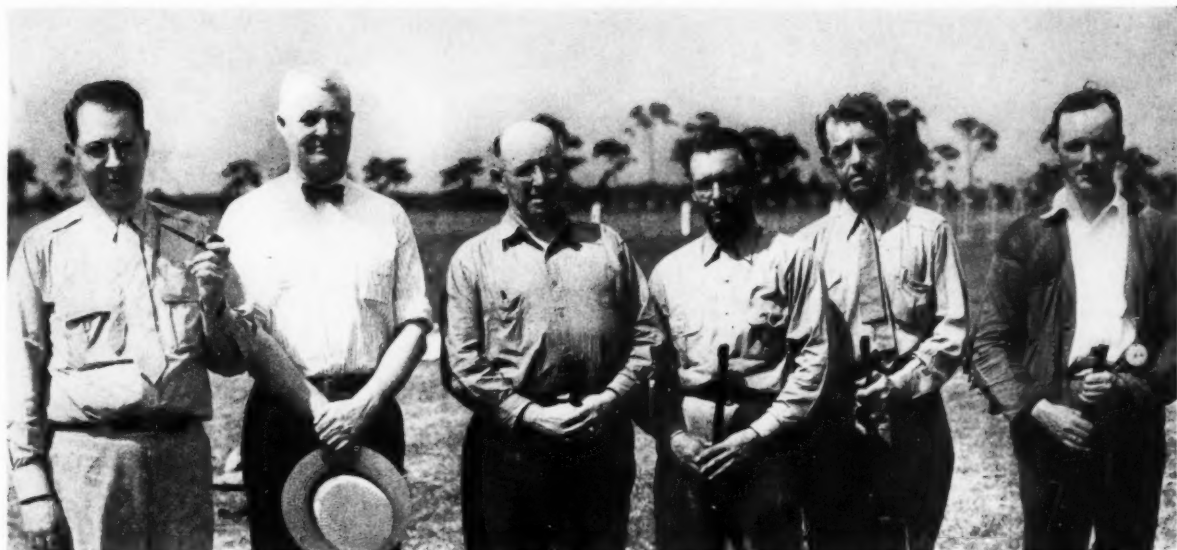
Texas Civilians and the Badgers, two teams whose membership included at least one man who was partly responsible for introducing the game. But they demonstrated that previous experience is no great asset in this fast moving game for it required almost three minutes for the Badgers to eliminate their competitors from the event. Randle has not yet discovered why his target refused to go down from one of his shots. The final round was the poorest match of the day, for the Sunshine marksmen now had their sights set perfectly and they accounted for two of their targets on the first volley and completed the job on the second in the fast time of only twenty-five seconds.

This new match was only one of the interesting features that will make the 1938 Mid-Winter Tournament stand out in the memories of everyone who was fortunate enough to have a part in it. The weather committee was more efficient than they ever have been in the past. They managed to keep the temperature at that ideal point where it is equally comfortable to wear a shooting coat or to run around the range in shirt sleeves. The only variation was in the direction and velocity which was dished up different for every match, now coming from the east, then reversing itself for a few hours, and sometimes settling into a nice steady fish tail breeze for the entire duration of a match.

Since the idea of conducting an annual rifle tournament as part of the winter program of this resort city was first conceived by a couple of officers of the Florida State Rifle Association in 1931, this tournament has grown and developed into a national institution. Not all shooters are able to steal away from their home fires in the middle of winter to bask in the Southern sunshine, but for those who are able to make the trip, an ideal shooting program and ideal companionships await them. Twenty-three matches are included on the program, which is spread out over a five-day period to give everyone an opportunity to gradually loosen his muscles and take the kinks out of a frame which has had but little exercise during the off-season.







**Executive Committee—left to right: F. A. Moulton, Range Officer; Lt. Col. B. W. Mills, Executive Officer; T. Randle; T. F. Bridgeland; F. J. Kahrs; V. O. Wehle**

The shooting plant has been six years in the making and has now had nearly all the bugs ironed out of it. The last important defect will be removed with the installation of a new set of numbers designed to make it more difficult for the boys who wish to compete for the cross-fire aggregate. Even this change will not offset the strategy used by Sam Kitchen of Jacksonville, Florida, in winning the event this year. Kitchen, squadded to shoot on target number twelve in the first event of the day, continued to pour them into the same target for the second event, even though he had in the meantime transferred all his equipment to a new firing point three spaces away. The eight-point lead he gained in this one match was enough to earn the trophy for him even though William Kerr of West Palm Beach

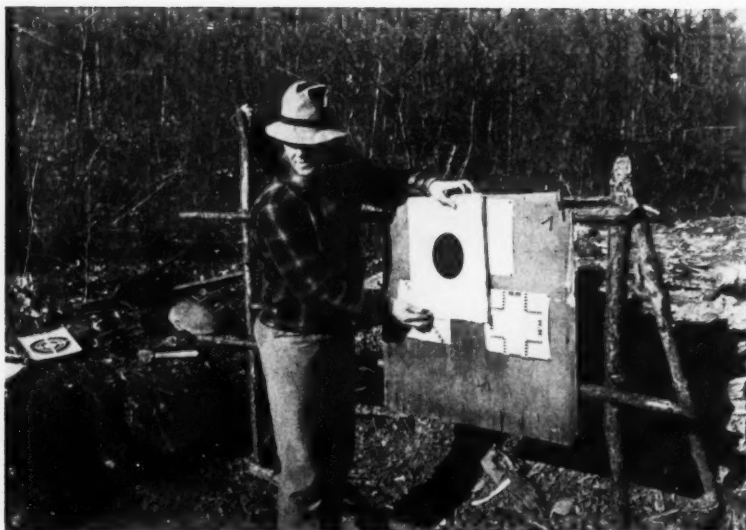
tried to catch him a day later with seven cross-fires in one stage of a match. Kerr, a 1938 convert to the sport, showed how fast he has learned to shoot by placing tenth in the last individual event on the program, an excellent performance for a newcomer in view of the caliber of the competition he was called upon to face in his first open tournament.

Major honors for the tournament go to Claude Westfall of Athens, Ohio, and R. C. Pope of Dallas, Texas. To Westfall goes the crown of National Mid-Winter champion by virtue of a week of very consistent shooting that left him with a four-point advantage over his nearest competitor in the six-match aggregate and only one point behind Pope in the metallic sights aggregate which carries with it the Southeastern Championship.

*(Continued on page 34)*







*Watching the observer—100 yards distant—for the next signal while spotting the aiming point or triangle dot. Note the V.H. target on the bank behind the operator*

## Error of Aim With Scopes

By F. C. NESS

**B**EING interested in making adequate allowance for any important errors of aim when appraising our test groups, we set out to learn how accurately we could align sights and target, using such equipment as we had on hand, which included some thirty-odd scopes and several types of targets. We were surprised to find how little, actually, is the error of aim with a favorable combination.

We made, at 100 yards, dozens of 3-dot groups. These triangles were carefully pin-pricked and measured in hundredths of an inch. A second 3-dot group was immediately super-imposed on the first triangle to register any shift of the zero, which was obtained by measuring the extreme spread of the whole, 6-dot, group. Because eye-preferences for sight-and-target combinations vary with the individual shooter, each triangulation test was duplicated by another shooter to establish a 12-dot average for two shooters.

It proved to be a very tedious task. We spent days on the range, without the alleviating fun of firing a shot, because so many ideas had to be developed for eventual acceptance or rejection. We encountered practically every weather condition common to our Washington climate, from balmy, early-autumn to blustery or drizzly late-winter. Light changes, apparently, did not have much effect.

Targets had to be tested for selection. Best methods were carefully tried for adoption. When there was a thawing frost we found that our bench rest would settle appreciably between individual dots, and so string our groups vertically. To eliminate that effect we used the Hubalek machine rest. Four different shooting glasses were tried and found to have little effect. Mirage-and-wind effect on aim was encountered and found to be negligible, because the eye unconsciously takes an average view and so forms a uniform mental picture despite the apparent movement of the cross hairs. Fortunately our patience held, and at last we had sufficient data for making comparisons and for forming opinions, if not conclusions.

We had hoped to make a graphic comparison of the different types of scopes, because we had expected to find a direct rela-

tionship between magnification and error of aim. This ratio, however, failed to develop in our triangulation tests, except in a very general way. That is, only a class difference was indicated and only as a general trend.

In one uniform test of 16 different cross-hair scopes, the leading nine included: one 3-power, three 4-power, one 6-power, two 8-power, one 10-power, and one 15-power. The last in order of the same group included: two 3-power, two 4-power, one 5-power, one 6-power and one 7-power. On the small-bore target the best five ran: 8X, 7X, 10X, 15X and 8X in order. With post reticules the respective order of rating ran:  $2\frac{1}{2}$ X, 4X,  $2\frac{3}{4}$ X,  $2\frac{1}{2}$ X,  $2\frac{3}{4}$ X and  $2\frac{3}{4}$ X in one test, and  $2\frac{3}{4}$ X,  $2\frac{1}{4}$ X,  $2\frac{1}{2}$ X,  $2\frac{3}{4}$ X, and  $1\frac{1}{2}$ X in another test. Cheap and costly hunting and target scopes were represented (with a single exception) in each group.

We do not believe such a ratio can be satisfactorily established. However, it could be determined by uniformly testing several scopes of the same make and grade, with similar posts or similar cross hairs, but each having a different magnification to provide a range from low-power to high. We are going to attempt something of this nature by equipping our 15X target scope with a T. K. Lee center-dot reticule for direct comparison against our similarly equipped 8X target scope.

The influence of magnification on the error of aim, as brought out in these accuracy tests, was too indefinite to more than broadly classify the different powers and this without ranking them within their respective classes. Thus we have all the post-reticule scopes, up to four magnifications, in one low-power group, all the cross-hair scopes from 3X to 6X in a medium-power group and the high-power target scopes, of 7X to 15X, in a final group. This general classification was definitely determined in a special survey of our results, and then only by restricting the low-power group to the standard target, the medium-power group to the V.H. target and the high-power group to both targets, equally, for an average. With only 6-dot groups considered and each different magnification averaged on this particular basis, we have the following merit arrangement:



Power	High	Med.	Low
10X	.203	...	...
8X	.210	...	...
15X	.230	...	...
7X	.230	...	...
3X	...	.248	...
4X	...	.251	...
6X	...	.260	...
5X	...	.308	...
2 1/4 X	...	...	.380
2 3/4 X	...	...	.395
2 1/2 X	...	...	.415
1 1/2 X	...	...	.775

We tried, but later rejected, the "Morton-Point" black-triangle target. The 200-yard Donaldson group-test target was better, because it proved to be suitable for a variety of reticle types and sizes. The Kilbourn (light-colored-center-cross) is an accurate group-test target, but for some of the coarser cross hairs it was not as satisfactory as the V. H. True Vision target of somewhat similar type, which was adopted. The standard 100-yard (6-inch-black) small-bore target, of course, was included as an essential.

Using a 15X scope with fine match-type cross hairs, we made 40 triangles using these several targets, with and without glasses, on different days, in bright light and dull light. The average error of aim was less than 1/4-inch at 100 yards.

Results obtained by the two observers varied appreciably, but this made our error-averages more representative and more nearly conclusive, since the errors of both were included. In fact, had either relied upon his own results alone, the outcome would have been quite different. One represented eyes 30 years old, the other, 40-year vision. Both had normal vision, but practice and experience apparently made an appreciable difference. Note how the following individual averages (of six 3-dot triangles per target) would have altered the relative-error order, had either been taken alone.

Target	40-yr. Vision	30-yr. Vision
"V.H."	.125 inch	.277 inch
"S.B."	.132 inch	.220 inch
"M.P."	.192 inch	.277 inch
"H.A.D."	.197 inch	.242 inch

In order to include every possible credit in our comparison test of these four targets, we averaged the four 3-dot triangles and the two 6-dot groups, obtained with each one, in order to fairly determine the relative error, or mean dispersion. The grand average for all four was only .223 inch at 100 yards, or less than a quarter-minute of angle. The V.H. target rated better than this grand average, with a mean error of .194 inch. The standard small-bore target equalled the grand average with .225 inch. The M.P. black-triangle rated .273 inch, and the Donaldson (2 3/16-inch white-center) made a mean of .269 inch. Because the extreme variation with the V.H. target was only .048 inch (.170 min. and .218 max.), and because its *maximum* error was less than the *minimum* error with any of the other special targets, the V.H. was the only special target to be adopted for our continued triangulation tests. In the final standing, on all targets, the average was .225 inch without shooting glasses and .215 inch with glasses, which is to say, practically the same.

Using the V.H. target, we put all our cross-hair scopes through the 12-dot (4 triangles) test at 100 yards, picking overcast days after completing our preliminary target test already described. Those having fine match-type reticles were also tried on the standard small-bore target. Our post-reticle scopes were similarly given the 12-dot test on the small-bore target, aimed at 6 o'clock under the 6-inch black. A few posts were also tried on a white target-paster, in the center of the small-bore target, for comparison dope.

Considering only the 6-dot groups, obtained by both shooters, the Marlin No. 2, 4-power scope led the parade with a fine average dispersion of .170 inch on the V.H. target. The 15X Super-

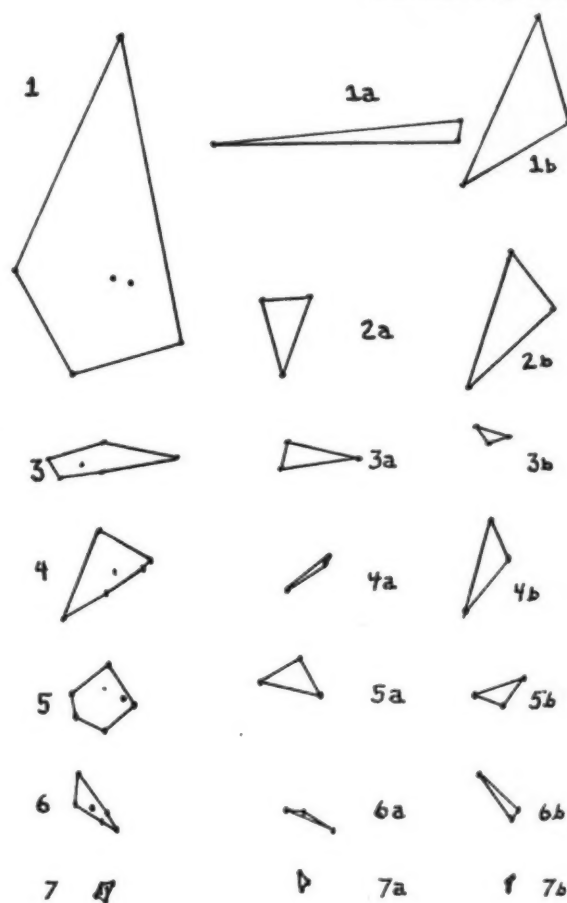
Targetspot and 8X Jr. Targetspot were next, both with .185 inch. These were followed by the 10X Unertl and the 4X Unertl with .195 inch and .205 inch, respectively. The 8X Fecker with Lee center-dot came next with .220 inch. The 4X Hensoldt Dialytan and the "XXX" Malcolm tied on .230 inch, while the double-reticle 4X Mossberg made .235 inch. The maximum difference in this group (only .065 inch at 100 yards) is too small to be significant, and we would rate them all equally accurate on this V.H. target.

On the standard small-bore target, however, only the best target scopes placed. The order was slightly altered, but close for the first five. These were: the 8X Fecker with Lee center-dot, the 7X Belding & Mull, the 10X Unertl, the 15X Super-Targetspot and the 8X Junior Targetspot. The first two reached a new low, .150 inch for the Fecker and .165 inch for the B.&M. The latter had an average error of .295 inch on the V.H. target.

On the V.H. target the other cross-hair scopes tried included the No. 1 Malcolm 6X, the Lyman Expert 3X, the Winchester 5X, the Wollensak 4X, the Weaver 5X and the Zeiss Zielvier 4X. The error of aim for this group ranged from .260 inch to .360 inch, an extreme difference of only .100 inch at 100 yards.

Those scopes having post reticles did not fare so well. The only direct comparison obtained was with the double-reticle Mossberg whose post rated .425 inch as against .235 inch for its interchangeable cross hair on the same target. That is .190 inch less error of aim for the cross-hair reticle in the same scope, in the same test. The scopes tested in this group were the 2 1/2 X Noske, the 4X Mossberg, already mentioned, the 2 3/4 X Weaver,

(Continued on page 35)





# Now That You Have a Camera—

By MAURICE KELLERMAN

## PART III

**I**N my two previous articles I went through what might be called a catalogue of types of cameras, and pointed to their individual characteristics so that the sportsman might select the kind best suited to his particular needs.

Having made the selection of camera, the sportsman is confronted with the problem of learning how to use it to best advantage for each picture he is going to make. This entails more than a mere familiarity with the mechanics of this instrument. It means such things as deciding the viewpoint, direction of light in relation to subject, etc. This last question influences the important matter of exposure, which in turn affects the final photographic effect and quality of the picture.

Then there is the composition of the picture, which dictates whether the ultimate print is to be a vertical or horizontal view. Let us begin with the mechanics of the camera.

Broadly speaking, there are three considerations which are purely mechanical: Focus, Diaphragm Opening in the lens, and Shutter Speed. Without the correct setting of each of these three factors, no picture can be successful.

All cameras, no matter of what type, are built to the same ultimate purpose, that is, to produce a picture on a negative, and consequently all cameras, except the dollar box variety, have mechanical means for providing the three essential requirements of Focus, Diaphragm Opening in the lens, and Shutter Speed control. I presume, therefore, that any man who has bought his camera has taken the precaution to find out from the salesman how his individual camera actually works.

So, having acquired a new camera, the first thing to do is to become thoroughly familiar with its mechanical manipulation. Learn to get your equipment into action quickly so that you do not fumble or forget when excited by the picture situation.

Shooting with a camera has the same psychological reaction on some men as shooting with a gun. How often we hear of a hunter forgetting to pull the safety off his rifle when the game appears, or pumping all the cartridges out of the magazine in rapid succession without pulling the trigger once! "Buck fever" happens just as often to the photographer. He may fail to set the focus, or the lens diaphragm, or the shutter mechanism. Perhaps the most common fault is to forget to wind the film on to the next number. A good friend of mine, who is a very clever photographer, once developed a whole film-pack of 12 negatives, and . . . discovered complete blanks! He had forgotten to pull the slide in front of the film-pack. You can't tell a man to learn to be calm in the face of excitement such as being in the presence of game, but you *can* teach him to do things mechanically. So the first thing to do when acquiring a new camera is to learn the routine of its operation methodically until the actions become subconscious and automatic, just as a rifleman learns the art of rapid fire with a rifle.

Therefore, get your fingers thoroughly accustomed to handling and feeling the things that control Focus, Lens Diaphragm, and Shutter Setting. With some shutters such as the "Compur", between-the-lens type, two things are necessary: first the speed must be set by the indicator, then the shutter mechanism must be wound by pushing the lever. If the shutter is of the focal-plane (curtain near film or plate) type, such as on the Graflex, the slit size must be set and the spring tension on the roller must also be correctly set to give the speed and aperture combination for the exposure desired, as indicated by the table attached to the camera.

Since exposure is the result of two mechanical devices, we

must first determine the correct amount of light which must reach the film through the lens. The lens diaphragm regulates the size of the opening, within the lens, through which the light reflected from the subject passes. The shutter regulates the duration of time that the light is allowed to pass through the lens diaphragm. So, a given amount of light having been previously determined, preferably by an exposure meter, we have two ways of controlling the transmission of this amount of light from the subject to the film: either by the size of opening of the lens diaphragm, or by the speed at which the shutter works.

Lens diaphragms are generally marked with a series of numbers. The letter "f" in front of the number represents a symbol referring to the *relative* aperture of the lens to its focal length. Example: f:4 equals a lens opening one quarter of the focal length of the lens. For example, four inch lens with a one inch diameter opening is working, then, at f:4.

Each successive *higher* number allows only *one half* the amount of light to pass through. For instance, taking the following table as typical:

Opening: . . . . .	f:4	5.6	8.	11.	16.	22.
Amount of light value:	1	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{16}$	$\frac{1}{32}$

If your camera diaphragm begins with a higher or lower figure, simply move the lower figures of light values over so that the No. 1 comes under the lowest diaphragm number. The halved fractions will simply fall under the other diaphragm numbers and each higher diaphragm number will allow half the exposure. Don't forget we are not concerned here with any definite measured amount of light as a standard unit, but simply with proportions of light values. This may seem a little puzzling at first, but to me it's not half as complicated as figuring minutes of elevation over given distances on a Lyman 48 rifle sight.

Shutter speeds are no problem. The figures and fractions are clearly marked and are self-explanatory.

Now, to apply our combination of lens openings and shutter speeds is elementary arithmetic. If the exposure meter indicates an exposure of  $\frac{1}{500}$ th of a second (shutter speed) at a lens diaphragm opening of f:8, the same amount of exposure may be given by opening the lens to f:5.6 and, since that opening allows twice as much light to pass through the lens as f:8, we must cut down the duration of passing light, so the shutter must operate twice as fast, that is at  $\frac{1}{1000}$ th of a second.

To reverse this process, if we begin with the same figures given by the meter of f:8 opening at  $\frac{1}{500}$ th sec., we may close the diaphragm down to f:11 and run the shutter at  $\frac{1}{250}$ th sec.

I have rather stressed this question of correct and relative exposure methods, as correct exposure is the one greatest contributing factor toward making good pictures. The rest is comparatively simple. It is important to understand the relation of diaphragm opening to shutter speed as it often becomes necessary to shoot at high shutter speed and large diaphragm opening in order to "stop" fast action; or it may be just as important on another occasion to stop down the diaphragm to a small opening in order to get depth of focus and, in this case, we must compensate for exposure by shooting with a slow shutter speed.

This brings us to *depth of focus*. This term *simply means* the area, in front of and behind the principal object focused on, that the lens is capable of keeping in sharp focus. Without going into a study of photographic optics, let us simply accept









Fig. 3



the established principle and fact that the more we can close down the lens diaphragm, the more depth of focus we get in our picture. Also, a short (focal length) lens has inherently more depth of focus at any given opening (say  $f:8$ ) than a longer (focal length) lens at the same opening. For instance, a four inch lens working at  $f:8$  will have twice the depth of focus of an eight inch lens which is also working at  $f:8$ . Why? Because the *actual* diameter of the diaphragm opening is what controls the amount of depth of focus. So the four inch lens working at  $f:8$  has an actual opening of a half inch diameter, whereas the eight inch lens which is also working at  $f:8$  has an actual opening of one inch.

The pheasant pictures shown make clear this matter of depth of focus. In the general view, Figure 1, we see a man feeding a lot of birds. The depth of the picture from camera to the willow tree is probably 25 feet, yet all the birds within this area are sharp; in fact, the porch posts away off in the distance are still sharp. This picture was made with a small roll film camera of  $1\frac{5}{8} \times 2\frac{1}{2}$  inch negative size. The lens is of three inch focal length and was stopped down to  $f:8$  for this picture. The shutter speed used was  $\frac{1}{1000}$  sec. The total result is a sharp picture all over.

In the close up of the single cock pheasant alongside the fence, Figure 2, we have a striking effect of shallow focal plane—that is, very little depth of focus. And what is more, it is an advantage in this instance, as the sharpness of the bird emphasized as it is against the indistinct background, makes his alert pose and beautiful plumage stand out more

*Note lens hood to keep out direct rays of sun; also steady support for camera against forehead, with both elbows against body. Thumb squeezes trigger*

clearly by contrast, and centers the attention on the subject, which in this case is the bird and not the background.





Fig. 4

This shot was made with a  $3\frac{1}{4} \times 4\frac{1}{4}$  in. Graflex, using an 8 inch lens which was only stopped down (diaphragm opening) to f:5.6. The shutter speed was  $\frac{1}{500}$ th sec.

I would like to point out here, from these two pictures, the relative advantages of the two types of cameras used for these two shots.

In the general view, I wanted a lot of area in the picture, with plenty of depth of focus—everything sharp; so I selected the camera with short focus lens. I knew that by setting the focus at about 25 ft. and stopping down to f:8, all would be sharp. Then, to get a large picture afterward, I relied on the enlarger.

For the second picture of the lone cock, I chose my Graflex because I *wanted* shallow depth of focus and only the bird crisply sharp. I set the lens for f:5.6 diaphragm, then the curtain shutter opening and spring tension to give an exposure of  $\frac{1}{500}$ th. I then set about following the bird by watching on the ground glass in the camera hood. I kept changing the focus as he moved about; then when he struck the pose I wanted, all I had to do was to trip the shutter.

Had I been trying to make this shot with the little roll film camera, I would have had to check focus "by-guess-and-by-gosh" each time the bird moved, which would have required taking the eye off him through the finder, with the result that I probably would have been looking at the focus marks on the lens when I should have been snapping the camera.

The latest small cameras are equipped with a range finder hooked up to the focussing adjustment, but this combination we only find in the most expensive outfits. However, the camera I used was not so equipped. And now, having gulped down all this technical



*This picture shows another way to hold a small camera steady. The lens hood is omitted here, as we are not shooting into the light*



stuff, let us consider one more piece of equipment without which you should never venture forth.

If you haven't an exposure meter already, get one right away. Any kind will do. There is the cheap type in which you compare the light on the scene before you with a given set of standard scenes of various characters on a card. From this card you also get your film speed table, your light value table for any month in the year, and your resulting shutter and diaphragm speeds. Of this type of exposure meter is the Burroughs Wellcome which comes in a little pocket book replete with interesting photographic data—very useful. Cost about one dollar.

Another type of meter requires the eye to look through a series of darkening shades in an eye-piece. Of this kind there are a dozen or more on the market. I like the Leudi because it is small and cheap—about two dollars.

The latest, bulkiest, and most expensive is the kind using a photo-electric cell which actually measures the light reflected from the scene. The Weston is the best known of these and costs about \$22.50. Too much money and too bulky for the average sportsman, but a grand piece of scientific equipment for the camera bug. Imagine trekking over the high spots of British Columbia after goat and sheep with rifle, cartridges and other gear, of which is a tiny Leica or Contax camera, then taking along an exposure meter weighing and bulking more than your camera!

All the exposure meters carry instructions for operating, and fifteen minutes will set you straight on operation of the meter and reading off your exposure for any given scene.

Don't guess your exposures. Rely on the meter and, if trials and subsequent exposures of film indicate that you are over or under exposing in general, simply read the meter one number higher or lower to compensate for *your* human equation error.

Now let us go out and make a few exposures on some hypothetical locations.

A camp scene in the woods. First we consider *viewpoint*. This is decided by walking around the camp and seeing from which angle the picture looks most pleasing and desirable. In connection with viewpoint, having decided on the angle from which to make the picture, we must see through the camera finder how much we want in the picture. This we ascertain by moving forward and backward and watching through the finder. Next, we must see that the camp is favorably lit by the sun. The safest lighting for the general run of pictures is with the sun at about 45° angle behind the camera. This gives shadows which are not too long or empty and yet relieve the portions of the picture strongly lit by the sun.

One more thing in connection with the viewpoint, after we are satisfied with the angle, distance and lighting conditions, is elevation of camera. We are accustomed to viewing things and scenes from eye height—5 feet from the ground. But for a picture, don't take this for granted. Perhaps a nearby log or a camp box will raise you an extra foot or so which may increase and improve the perspective by separating the planes of various objects. Then again by resting one knee on the ground, you may get a better picture of a bird walking, thus giving a low viewpoint.

Next thing is to determine the exposure by your exposure meter. Suppose the meter indicates  $\frac{1}{500}$ th sec. at a diaphragm opening f:8. That is an average exposure for a well-lit scene with plenty of sunlight on the subject. (And by the way, do not shoot scenes with the camera held in the hand at slower speeds than  $\frac{1}{500}$ th, for when enlarging such pictures made at slow speeds, there always seems to be a percentage that show some slight blurr, result of camera motion, thus killing the crisp sharpness of a good lens.) Set the lens diaphragm at f:8, then set the shutter speed at  $\frac{1}{500}$ th, and push over the lever to wind the shutter mechanism.

Are we ready to make the picture? How about focus—did we set that? No, sir! If you have not one of those new

fangled range finders built into your expensive camera, just pace off the distance *from* the principal object (perhaps the tent) *to* your camera location. Each good pace is worth three feet. Now set the focus scale at the footage measured. Raise the camera finder to the eye and steady yourself, with feet slightly apart. See in the finder that the camera is level—top line of finder horizontal and side lines quite vertical. When quite ready, set your trigger finger gently on the shutter release, take a breath, not too deep, and hold it. Squeeze the shutter release gradually, but firmly, so that the shutter goes off without your knowing exactly *when*.

You will notice that this technique is exactly like slow-fire rifle shooting. It is the only way to make steady pictures. If you pull or jerk the shutter release, the camera will surely go cock-eyed and the jerk will make a blurred picture. When it comes to shooting fast action pictures, you will apply the same process as for slow ones, but the muscles will work faster. Don't flinch your shutter off.

Now is the time to wind your film on to the next number. This is important. Get the absolute habit of automatically winding the film just as soon as you have fired the shutter on the last picture. In this way you will never spoil one good picture by putting another good one on top of it.

Here's another good habit: As soon as you have wound off the film to the next picture, check over your three mechanical operations: Diaphragm, Shutter and Focus, to be sure you did not miff one of them. There might yet be time to make it over.

Let's move on to another location. A bend in a rapid river. Half a mile up you see a canoe coming down toward you. There is white water 40 yards from where you stand. You want a picture of the canoe as it jumps through the rapids. Quickly read your meter—but look out, the sun is high, but facing toward you. Don't let it shine into your exposure meter or the meter will read too high. Point it down at the water; work out the reading, say f:11 at  $\frac{1}{500}$ th sec. Set diaphragm at f:11 and shutter at  $\frac{1}{500}$ th, and don't forget to wind the shutter. Set focus at infinity as 40 yards is infinity on all ordinary sized film cameras. Take up your steady stand with camera at ready position, aiming at the rapids. The sun facing you may be hitting the lens. This must not be, so if you haven't a lens shade, get your guide or partner to hold his hat high over and in front of the camera, and gradually bring the hat down until its shadow *just* shades the lens. You are ready to shoot. (See Figure 3.) As soon as the canoe comes into the edge of your picture as seen through the finder, begin to "squeeze the trigger," then when the canoe is in the right spot, give the squeeze that extra little bit that fires the gun. Quick, wind off the film to the next number. Now you can relax and check over your mechanics; but this time the canoe is gone—way down the river—far beyond recall, and if you *should* discover an error, it only goes to show that one good check up *before* taking the picture is worth two after it's all over!

Suppose, instead of the above scene, the river had been very narrow, and the rapids only 15 yards from you, as in Figure 4. The canoe, being much nearer to you, moves much faster through your more limited picture area. One hundredth of a second is too slow a shutter speed to stop the action. What is the remedy? Double up the shutter speed to  $\frac{1}{200}$ th sec. and open the diaphragm one number from f:11 to f:8. The resulting exposure will then be the same. The focus will also have to be set at 40 or 50 feet instead of infinity.

Now for a close-up of your partner with his big buck just shot! It sounds like a simple picture, but it has one or two pitfalls to be wary of: exact focus and color contrast.

There is no sunlight, so contrast is naturally low, and lack of light means increased exposure. Get the buck out into some open place where there is *some* light. Select a background for him to lie on which will be either lighter or darker than his

(Continued on page 38)



# Introductory Study of Automatic Firearms

By MELVIN M. JOHNSON, JR.

**M**OST of us treat firearms like automobiles and radios. We usually know enough to get the correct ammunition, to load, fire, put on the safety, and clean the barrel. We know how to operate a lever, bolt, or trombone repeating action. Some of us hunt with auto-loading shotguns or self-loading rifles, keep an automatic pistol under our pillow, and fire off boxes of twenty-two cartridges in an automatic "plinking" rifle.

But what makes a machine gun fire so fast? What causes the "automatic" shotgun to eject an empty shell every time you pull the trigger? Why are there no ultra-high-powered semi-automatic rifles on the market? If a pistol can shoot automatically, how about building a rifle with the same mechanism?

Some years ago I was presented with a Browning automatic shotgun, twelve gauge. To the best of my recollection I did not know what caused the gun to shoot automatically. I suppose it never occurred to me to find out. Later on I became interested in such matters. I eventually found out why my .45 Colt Service pistol, as well as my Browning shotgun, flung out the empty cases; why machine guns "acted that way"; and I wondered why someone could not design a simple high-powered .30-'06 semi-automatic shoulder rifle.

I wondered why machine guns needed so many parts. Then I went to a small-arms school. There I learned to dismount and assemble the complicated Brownings. But as soon as I passed across the threshold of Marine Barracks, Quantico, Virginia, my self-assurance fled. I realized that for me to hope to understand the workings of such weapons, someone must build a very simple mechanism.

If logic has any place in an introductory study, it should be applied at the outset. In a word, we should first pause to examine the best-known mechanisms. Moreover, we should analyze those general fundamental principles which pertain to an automatic weapon. We want to get the layman's low-down on automatics. We are entirely unfamiliar with technicalities. We want automatic actions simply explained.

First of all, we should differentiate between the various types or kinds of automatics. Machine guns are self-firing. You hold the trigger back and bullets pour out of the barrel. Theoretically, if you held the trigger for one minute, and there were sufficient cartridges in the belt or drum, the machine gun would fire from three hundred up to fourteen hundred shots, depending upon the design of the mechanism involved. Actually, you press the trigger for an instant at a time, and the gun fires in bursts of from three to thirty shots. Thus, the machine gun is self-firing or "full automatic."

The shoulder rifle or shotgun, and the pistol, are self-loading, or auto-loading, or "semi-automatic." Thus, they reload themselves every time you fire a shot. The Remington or Browning shotgun and the Colt pistol are examples of this type of automatic weapon.

There are, in addition, certain shoulder arms which may be fired either full or semi-automatic. Among these are the Browning Machine Rifle and the Thompson sub-machine gun.

Now, we can dispose of the above differentiations in considering the basic automatic mechanism. We are actually more concerned with the loading than with the firing of the "automatic," because all automatics must load themselves in order to be fired.

Instead of monkeying with a bolt handle, a lever, or a slide, in order to throw out the empty shell and shove in another,

we require a machine to do that for us. Of course we shall be obliged to replace the magazine every five or ten shots.

Before the gun can be made automatic we must provide some kind of power or force to operate it. Obviously, the operating power must come from the gun itself. Therefore we should examine a typical rifle carefully. Let's take the 1903 Springfield rifle, caliber .30-'06, and see what really goes on in an ordinary gun.

The loaded cartridge is pushed into the chamber of the Springfield, and locked there by the bolt which slides back and forth in the receiver. The bolt has two locking lugs, which, when rotated through ninety degrees, rest against corresponding shoulders in the forward end of the receiver right back of the chamber. The locking principle of the bolt is similar to that of a common type of burglar lock for household doors. In addition, there is a means of hitting the primer of the cartridge when the latter is securely locked in the chamber. The other parts of the Springfield are not essential to this discussion.

Now, what happens when we load the Springfield and pull the trigger? First, the primer ignites the powder, and the powder burns, forming a gas which expands with terrific force in every direction. The expanding gas develops a pressure of about 50,000 pounds per square inch, and drives the bullet down the barrel and out at the muzzle.

Meanwhile, of course, the bolt is *locked*, and cannot move. The neck of the brass cartridge case prevents the gas from escaping at the rear of the chamber. When the gas expands it presses the walls of the brass case against the walls of the chamber with great force. The walls of the case at the mouth and shoulder of the bottle-necked .30-'06 cartridge are thinner than toward the base or rear of the shell.

After the bullet leaves the barrel, the pressure quickly drops in the chamber to zero, at which time we can unlock the bolt and extract the empty shell. Of course if we unlocked the bolt before the bullet had left the barrel, the high pressure would cause the bolt to be blown out and the cartridge case ruptured. For a short interval after the bullet actually leaves the muzzle, there remains an appreciable amount of pressure in the chamber, which drops rapidly to a point at which it is not dangerous to open the breech, and quickly reaches zero. In general, therefore, we may say that the bolt must not be unlocked until after the bullet has left the muzzle. Thus we may formulate two general rules or postulates:

1. The breech bolt of an automatic arm must *never* be opened until the chamber pressure has dropped to a safe limit.

2. There is a powerful force exerted by the powder gas against the face of the breech bolt, which may be used to provide *operating* power.

But let us see if there is another force in the gun which can be used to operate the bolt.

Artillerymen used to set up a cannon, aim it, and fire. Then they would hitch up the gun and haul it back to the firing line. Finally, a bright soldier rigged up a cannon so that when it fired, the barrel and breech block would slide backward on a cradle in the gun carriage. This absorbed the "kick," and now the cannoneers sit on the gun carriage while firing.

Hiram S. Maxim once patented a scheme, illustrated herewith, which was arranged like this: He put a movable buttplate on a rod which was connected to the lever of a Model 1873 Winchester repeating rifle. He set the buttplate back of the stock, and put a recoil spring between the buttplate



and the stock. When the gun fired, it "kicked" back against the slidable buttplate. This caused the lever to be pushed open by the connecting rod. The spring returned it. This gives us Rule Number 3:

3. The recoil of a rifle furnishes a force which may be used to operate an automatic firearm.

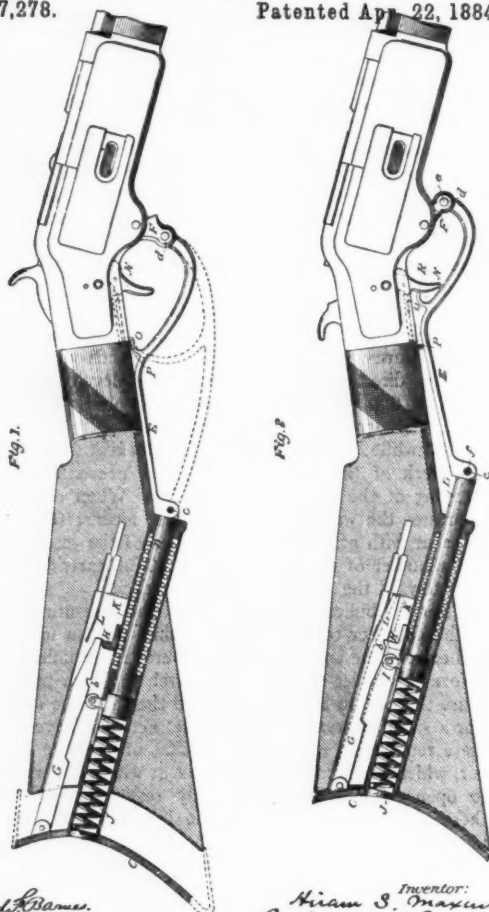
Suppose, now, that we tried to utilize some of the gas from the barrel to push a piston, as in the case of an automobile engine, for example. In that event we could put a long cyl-

H. S. MAXIM.

MECHANISM FOR OPERATING GUN LOCKS BY RECOIL.

No. 297,278.

Patented Apr. 22, 1884.



Witness:  
Raymond K. James.  
H. Frisby

Inventor:  
Hiram S. Maxim.  
By Arthur W. Page atty.

inder directly underneath the barrel. At some point along the barrel and near the muzzle we would bore a hole, so as to let gas enter the cylinder. We would put a piston in the cylinder, attached to a rod connecting with the bolt. Thus, gas from the barrel would push the piston, which, by means of the connecting rod, would operate the bolt. So we have Rule Number 4:

4. Powder gas under pressure may be made to operate an automatic firearm, by putting a gas port in the barrel and arranging a piston upon which the gas can act.

We may say that automatics are "actuated by interior motive forces." Technically, I suppose there is only one force: the explosion in the chamber. We may use it in the form of a "blow" on the breech block, which is commonly called "blow-back" and "retarded blow-back" actuation. Or we may use the explosion in its recoiling aspect, and call it the "short-recoil"

or "long-recoil." If we use the propelling gasses in the barrel by means of a gas port and piston, we speak of "gas-actuation."

Two operations are performed when we open a Springfield breech. First—when the pressure has dropped—we raise the bolt handle, thereby *unlocking* the bolt. Second, we *pull the bolt backwards* to the rear of the receiver. Thus, we extract and then eject the empty shell. In our *automatic* gun we must cause a force to unlock the breech. That same force, or some other, must be used to push or pull the bolt to the rear of the receiver. The first is the "unlocking movement." The second is called "the retraction of the breech block" or "the opening of the breech."

Now let us consider "residual chamber pressure." You will recall that in a Springfield rifle the maximum pressure is about 50,000 pounds per square inch. While the bullet is in the barrel, the pressure is extremely high. Just as the bullet leaves the muzzle the pressure is about one fourth of the maximum, or around 12,500 pounds. Of course this pressure thrusts back with great force upon the bolt. After the bullet has left the barrel, the pressure drops rapidly to zero. However, during that brief interval just after the bullet has left the barrel, there is still some pressure in the chamber, and that pressure is sufficient to push the bolt back and eject the shell without causing any rupture or breakage. This is sometimes called "residual chamber pressure" or "residual gas pressure," but we prefer to call it just plain "residual pressure." In order to utilize it the bolt must be unlocked "on time."

Thus we can formulate Rule Number 5:

5. There is a force called "residual pressure" operative during a brief interval after the bullet has left the muzzle, which may be used to *retract the bolt*.

Power being available for unlocking and retracting the bolt, how shall we push the bolt forward, shove in a fresh cartridge, and lock the breech?

We can put a *spring* behind the bolt. When the bolt is pushed to the rear by the operating force, the spring will be compressed. When the bolt has traveled far enough, it is stopped by a gadget called the "boltstop" or "buffer block." Then the spring can expand, and push the bolt forward again, thus taking care of the reloading and locking. This is called the *counter-recoil spring* or "mainspring."

Having examined a typical rifle and found power with which to "actuate" firearms automatically, how shall we harness up this power? Let us select a few well-known automatic weapons, and describe them. We may as well consider first the "blow-back," because that is the simplest.

In the blow-back we have a "counter-recoil spring." This spring stores up energy with which to return the breech bolt to its locked position. Next we have a sliding breech bolt *without any locking means*. Of course we have a barrel and a receiver.

Most of us are familiar with the .22 Colt Woodsman automatic pistol, or the Remington .22 automatic rifle, or the Winchester .22 automatic, or the Sears Roebuck "Ranger" .22 automatic, or the .351 (or .401) Winchester self-loading rifle. These are all blow-backs.

Suppose we insert a magazine into the .22 Colt pistol, and pull back and release the slide, which on this gun is also the breech block. The pistol is loaded. When we fire it the bullet, not the breech block, moves first, because the bullet weighs less than the breech block. More energy is required to start and move a heavy body than a light one. Pressure in a gun starts from zero and builds up to maximum. The bullet starts *long before* maximum pressure is reached. Now, the slide just cannot resist the maximum pressure, so it finally starts backward. Then it is blown to the rear by the pressure in the chamber—more especially by the *residual pressure* which remains in the chamber just after the bullet has left the muzzle. We should observe that the breech block does not open



materially until the pressure has dropped, in accordance with Rule Number 1. Of course, if we put a heavy enough block behind the .22, it would not move at all. On the other hand, if we used the blow-back system in a .30-'06, our breech block would have to weigh twenty-seven pounds!

The breech block used in the larger-calibered Winchester .401 rifle is connected to a heavy steel bar in the fore-end. The special cartridge cases used are comparatively tough, thick, and stubby. They do not tend to stick in the chamber, as do the .30-'06 or .22 cases. Consequently, because the mere inertia of a blow-back type of breech block does not prevent a slight movement while the chamber pressure is high, the .22 cartridge case must be *lubricated*, otherwise it might rupture. You will note in the instruction manual issued by the factory with each .22 automatic, that lubricated cartridges are prescribed.

We are seeking as our ultimate objective a mechanism for ultra-high-powered ammunition, such as the .30-'06. Lubrication is undesirable for such ammunition, and the breech block would have to be absurdly heavy. Therefore, we shall pass on to the "retarded-blow-back" class.

Retarded-blow-back mechanisms are quite ingenious. The term "retarded" is somewhat misleading, because the pure blow-back is *retarded* by inertia, whereas this other type is *retarded* by mechanical means. In either case the bolt or breech block must not open *until* the bullet has left the muzzle and the pressure has dropped to the safe limit.

Representative weapons in this class are the "Tommy gun," the Austrian Schwarzlose machine gun, the Pedersen semi-automatic rifle, and the Thompson semi-automatic rifle. The Thompson sub-machine gun, using the .45 A. C. P. cartridge, has a special sliding wedge which tends, during high pressure, to *retard* the rearward movement of the breech block resulting from the pressure or "blow" against it. The .45 Colt pistol cases can stand plenty of abuse, having thick brass walls and short bodies, which are under relatively low pressure; and this "Tommy" mechanism I regard as being very close to a pure blow-back.

The Schwarzlose and Pedersen employ a particularly ingenious system. To get a better idea of the principle, stand on one foot with your leg bent slightly at the knee. Relax your muscles and let the leg bend. The more the leg is bent, the more effective the weight of your body is against it. You need more muscle to hold up your body with a bent leg than with a straight one. Suppose—in theory—that you sit down, put your feet against a solid bar, and put your back against the sliding "blow-back" breech block of a big gun. Your legs are bent just a little. The breech block under pressure will push so hard against your back that your legs must bend at the knee, and the more they bend the easier it will be for the breech block to push you back. Thus, at the beginning your legs would have a mechanical advantage, but at the end the breech block would have it.

In the Schwarzlose machine gun there is a breech block, a connecting rod, and the equivalent of a crank shaft. In the locked position, the connecting rod and crank shaft are just barely off dead-center. The connecting rod and crank shaft are like your slightly bent legs in the situation described. When the gun is fired, the breech block is forced back by the pressure against it, but during the interval of *high pressure* the "blow-back" is at a mechanical disadvantage. As the pressure drops it gains a corresponding advantage, so that it can push the breech block to the rear, and thus operate the gun. The Pedersen rifle works in very much the same way. The breech block assembly bends up in the middle like a toggle joint, there being two carefully shaped surfaces which roll upon each other when the breech block opens. But, unfortunately, the breech blocks of both of these guns *move too soon*. The cartridge cases *must* be lubricated to prevent jamming.

As we have already seen, the forward portion of the cartridge case is pressed tightly against the chamber during the interval of high pressure, and serves as a gas seal. During that interval of high pressure, the base of the case must be supported firmly by the breech block, otherwise the shell will rupture; for the thin forward portion of the case wants to stay put, while the rear end does not, it being thicker brass. To avoid ruptured cartridge cases in the Schwarzlose and Pedersen, the cartridges must be lubricated. Then the forward portion will not stick but will slide back easily, and the empty case can be extracted without sticking or rupturing. This difficulty does *not* arise with *low-pressure* cartridges such as the .401, .351, .45 A. C. P., etc.

Residual pressure, of course, is the source of "retracting" power; that is, it pushes the breech block to the rear in these guns.

The Thompson semi-automatic rifle has exactly the same troubles as the Schwarzlose and Pedersen. Using *high-powered*

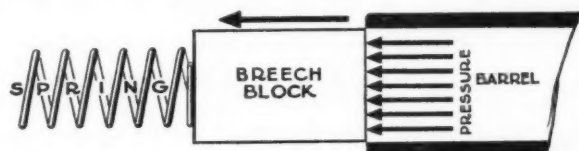
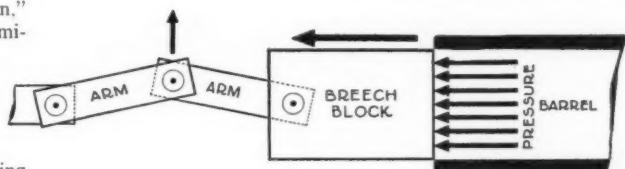
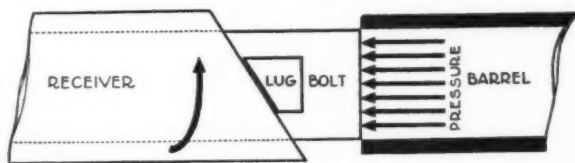


Diagram of blow-back action



Retarded blow-back (Schwarzlose and Pedersen)



This drawing illustrates principle employed in Thompson rifle

cartridges, the Thompson rifle requires oiled cases. This rifle uses a rotary bolt with *inclined lugs*. The sloping lugs allow the bolt to act just like a screw. When the pressure pushes upon the bolt face, the lugs give way and the bolt rotates to the unlocked position, whereupon residual pressure rushes to rearward. This is called the "Blish" principle.

The Schwarzlose machine gun is used in the Austrian Army. It is extremely heavy, and requires a pump to squirt oil into the chamber. The Pedersen and Thompson rifles were thoroughly tested by the United States Army, and finally rejected. Lubricated ammunition is not good for service use.

Recoiling-barrel actuation is very popular, and weapons on this principle are in common use. Two inventors—Maxim and Browning—are responsible for most of them. After Hiram S. Maxim had patented his peculiar lever-action gun with the special buttplate, he delved further into the idea of *harnessing the kick*. He mounted a barrel and breech block in a frame, and so arranged the parts that when the gun fired, the barrel and breech block could "kick back" or recoil within the frame. After the breech block and barrel had recoiled a short distance,

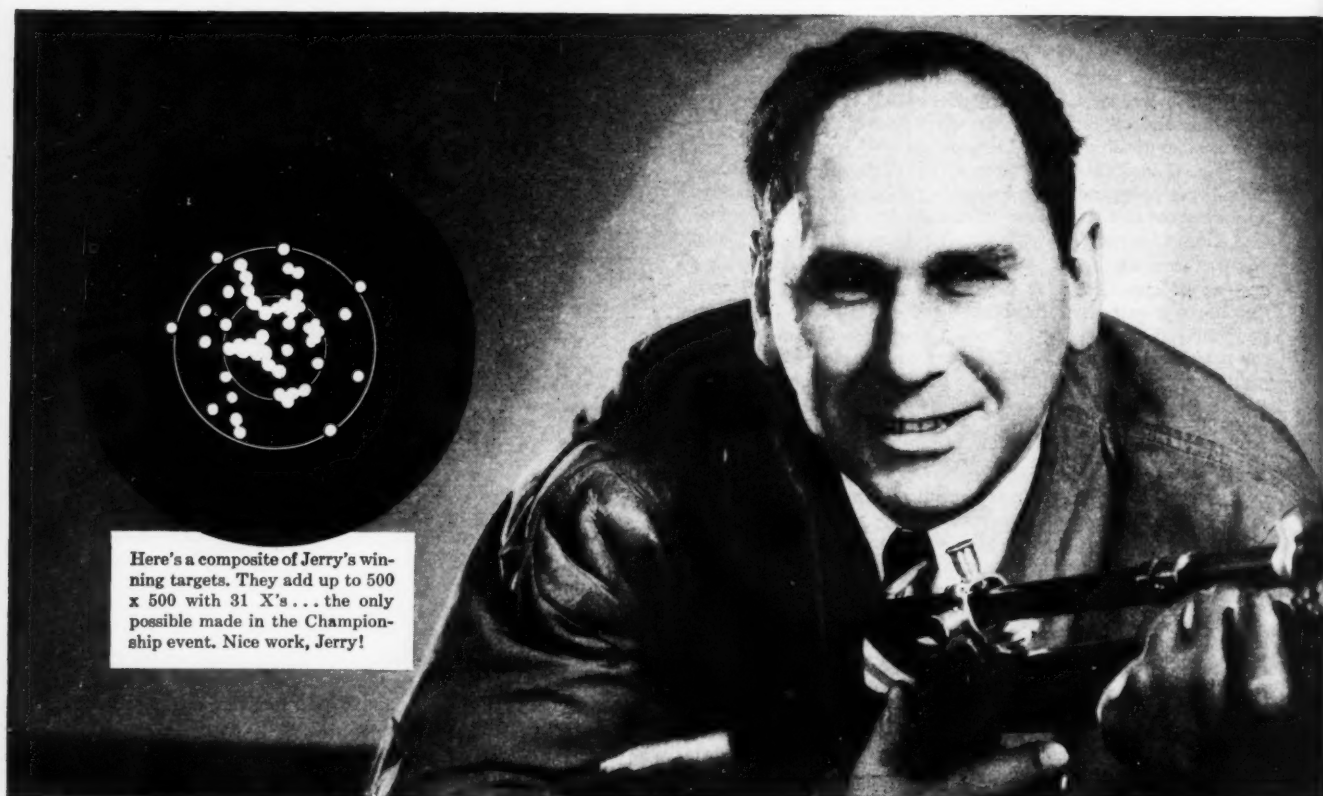


BRIDGEPORT, CONN., APRIL, 1938

Rifle Remington

# JERRY HILBORN WINS N.Y. METROPOLITAN

“PALMA MATCH” SHOOTER SCORES 500 X 500  
★ ★ ★ ★ ★ ONLY POSSIBLE OF MATCH ★ ★ ★ ★ ★



Here's a composite of Jerry's winning targets. They add up to 500 x 500 with 31 X's... the only possible made in the Championship event. Nice work, Jerry!

BROOKLYN, N. Y. Feb. 20—Manhattan's Jerry Hilborn today walked off with the Metropolitan Indoor Shooting Crown for 1938 with a possible score of 500 for 50 shots at 100 yards indoors. A total of 132 competitors fired in the match, but Jerry was the only one to go clean.

Old in shooting experience, but still young in years, Jerry made up his mind 16 years ago to win this championship.

Incidentally, he pinned his faith on Palma Match VEEZ 73, the world's finest .22 long rifle cartridge.

Speaking of the match, Jerry said, "While the score managed to win, the groups were pretty loose, and I guess I more or less coasted in on a horseshoe. The VEEZ 73 I used does shoot real tight groups. The other day at the Armory I made a 10-shot group measuring

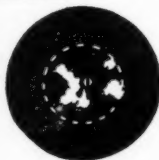
about  $\frac{3}{4}$  inch, which is a good example of what that stuff really will do."

But it takes a lot more than luck to win a match like this. Not many riflemen have the steadiness to keep a 50-shot string inside the 10 ring. You need the same consistent accuracy in the ammunition, too. That's why you find so many top shooters using Palma Match and Palma Kleanbore.

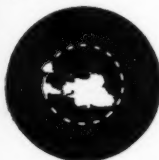


### FIVE SHOOTERS EARN NEW REMINGTON 10X BRASSARDS

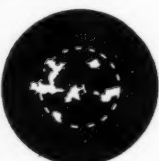
It's never easy to select a Target of the Month, but since the new Remington 10-X Brassards were announced it's harder than ever. These targets have honorable mentions at least, as well as brassards.



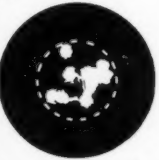
Milton C. Floor, of Mariemont, Cal., made this 3/4-inch center-to-center group with Palma Match at 100 yards. Iron sights, too!



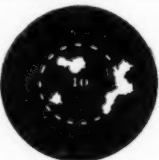
Here's another thumbnail group, made by G. E. Widger, Secretary of the Essex Troop Rifle Club with Palma Match. 100-yard range.



W. H. Lockwood of Norfolk, Va. made this well 10X possible with standard Kleanbore at 100 yards. We've been telling you that stuff will shoot. Iron sights, too!



B. M. Johnson of Fort Stockton, Texas, won the Target of the Month a little while ago... and nearly took it this month, too. Not one of these shots touches the line! Range—100 yds.



Here's a 10X possible made by Charlie Vincent of Utica, Mich., at the Niagara Frontier Smallbore Championship in Buffalo. Range—100 yds.; ammunition, Palma Match.

## BERGERSON BREAKS WASHINGTON STATE RECORD OVER DEWAR COURSE

Scores 400 x 400 with 32 X's—shooting  
"Palma Match"

### MID-ATLANTIC INDOOR TITLE TO SCHWEITZER

286 IS HIGH IN 3-  
POSITION EVENT

### RICHMOND HILL SETS NEW RECORD TO WIN TEAM MATCH

NEWARK, N. J.—At the recent Middle Atlantic Indoor Rifle Championships held under the auspices of the Essex Troop Rifle Team 102nd Cavalry of the N. J. National Guard, Bill Schweitzer of the Union County Rifle Club, shooting Kleanbore, won the Individual Match with a total of 286, consisting of 100 prone, 95 kneeling and 91 offhand. A. E. Olson of Lakewood, N. J., was third with 285, shooting Palma Match.

The Team Match was won by Richmond Hill Team No. 1 with a new record of 1129. Second place went to the Papco Club of Paterson, N. J., with 1120—all shooting Kleanbore—and the Brooklyn Edison Club took third with 1099. They also shot Kleanbore.

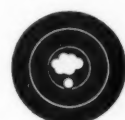
TACOMA, Wash.—Erling O. Bergerson of this city recently set a new state record by scoring 400 x 400 with 32 X's over the Dewar Course.

### Alice Bull is second

Mrs. Alice Bull, shooting her pet Model 37 Remington, was a close second with 400 x 400 with 31 X's.

These scores by Bergerson and Mrs. Bull are the only two 400's over the Dewar Course ever made in the state. Both used Palma Match ammunition in the match.

### BUD FRANKLIN EARNS A MODEL 37



INTERNATIONAL FALLS, Minn.—Seventeen-year-old Bud Franklin, son of Secretary E. R. Franklin of the Border Legion Rifle & Pistol Club of this city, has been putting so many Kleanbore bullets through the 10-ring this season that his father decided he had earned a new Remington Model 37.

Above is a sample of the kind of shooting Bud's been doing—a neat 99 offhand at 50 feet. And just wait till he gets that new rifle!

## POSSIBLES and IMPOSSIBLES

by FRANK J. KAHRS



Ever hear that old saw about Smallbore Shooters not being able to shoot a shotgun?

Well, T. K. Lee of Birmingham, Alabama, who has some renown with the .22, lists third high in the 1000-2000 division in the Amateur Trap-shooting Association Registered Averages with 1178 x 1200—an average of .9816!

\*\*\*

Have some swell targets from Paul A. McElroy and Harry Schweinsberg of Ellwood City, Pa. 198 x 200 in four-position competition at 75 ft. is *some* shooting for anybody. McElroy was shooting the course for the first time with his new Remington Model 37. Kleanbore ammunition, of course.

\*\*\*

I have a couple of pistol targets here that are honeys! Both possibles—one at 50 feet made by Hermann Steingass of Baltimore, Md., with Palma Kleanbore, and another at 25 feet by J. T. Duncan of Kansas City, Mo., shooting Kleanbore.

\*\*\*

On a cold, dark afternoon of January, with very little wind, a couple of marksmen, unable to stay indoors any longer, ventured forth to do a bit of testing of ammunition and guns at 100 yards.

They finally lifted their ancient and creaking bones up on a table and proceeded with the job at hand. The two ancients, Charlie Vincent of Utica, Mich., and Ned Moor of Detroit.

When the shooting was over, they compared notes and found that Ned Moor had fired altogether 65 rounds of .22 longrifle stuff, most of which was Palma Kleanbore XXX7. Out of those 65 tens approximately 57 were X's. Almost all these shots were with Palma Kleanbore XXX7. "But don't let that frighten you," says Charlie, "the new stuff for '38 coded XXX8 is just as good and may be a little better."

\*\*\*

I have some targets scored by Frank Crosby of Portland, Oregon, Francis Chidsey, Jr., of Wayne, Pa., Gilbert Twyman of Louisville, Ky., Gerald Day of Hamilton, Indiana, and E. R. Burmeister of Canandaigua, N. Y., which are so good I hate not to let you other fellows see them. However, there just isn't room enough in this issue.

## THE TARGET OF THE MONTH

First honors this month go to C. C. Taylor of Rixford, Pa. Just look at the size of this group! Made at a hundred yards with a 25-caliber Remington Model 30-S Rifle.



Each month Remington will produce what is in their opinion, "The Target of the Month." Only conditions: 1. It must be fired under N. R. A. rules. 2. Be witnessed by two people. 3. Be fired within one month previous to the time it was mailed to us. 4. Be fired with Remington ammunition or rifle. Send in "hot" targets to Frank Kahrs, Remington Arms Co., Inc., Bridgeport, Conn.



the bullet left the barrel; and Maxim arranged things so that after the pressure had dropped the breech block was *unlocked* from the barrel by the recoiling force. Due to the momentum gained from the "kick-back," the breech block left the barrel, and pulled out the empty case. Thus the breech block was retracted. The barrel was pushed forward and held in position until eventually the counter-recoil spring sent the breech block home again, thereby pushing in a new cartridge and locking the breech block with the barrel in the forward, firing position. The Maxim is *extremely complicated* in its parts, a fault common to nearly all machine guns.

After unlocking from the barrel, the breech block is retracted chiefly by the *momentum of its own recoil*, as well as by an acceleration derived mechanically from the barrel momentum after separation. Hiram Maxim's patents were issued before 1890.

During the 'nineties Paul Mauser, inventor of the famous Mauser bolt-action rifle, patented the Mauser automatic pistol. This weapon is widely used today. The barrel recoils in the frame for a short distance while locked to the breech block. The time taken to move this distance is sufficient to allow the bullet to leave the barrel and the pressure to drop to within residual limits. Then the breech block is unlocked from the barrel, and the residual pressure thrusts the block back, the empty shell being thereby extracted. The unlocking is effected by a simple cam, and the force of initial recoil furnishes the unlocking power. Momentum derived from the initial recoil contributes in very small measure to the retraction of the breech block, residual pressure being the primary retracting force.

Some may ask why Mauser did not employ some of the momentum of the barrel, as Maxim did, to help push the breech block. The answer is that Mauser had power enough already. You can easily use residual pressure for retraction in pistols, whereas in high-powered weapons residual pressure is much more difficult to use, because of the tendency of the cases to stick in the chamber, and also because of the problem of "timing." If we wait until the chamber pressure has dropped too low, we must use recoil momentum, as did Hiram Maxim.

George Luger arranged his pistol in the same way. The barrel recoils with the toggle-jointed breech block. About the time the bullet has left the muzzle, the toggle-pin in the breech block strikes a sloping surface on the frame. That causes the breech block to bend up in the middle. Thus the breech block is *unlocked* by recoil and *retracted* by residual pressure.

Back in the 'nineties John M. Browning took out some patents on a pistol which ultimately became the well-known .45 Colt Automatic Service pistol, Model of 1911. Like all the other arms previously discussed in this chapter, the Colt Automatic has a recoiling barrel. The barrel and the slide—or breech block—are locked together during the initial recoil of  $\frac{1}{2}$ -inch. The barrel has a pair of lugs above the chamber which engage in slots in the slide. The slide, remember, is really the *breech block*. Now there is a little gadget underneath the barrel called the "link," which is attached at one end to the barrel and at the other end to the frame. The gun is fired, and the barrel, locked to the slide, recoils with it. As the barrel moves backward the link causes it to be pulled slightly downward at its rear end. Thus the lugs at the top of the barrel are disengaged from the slots in the slide, and the barrel stops while the slide continues to the rear, driven primarily by residual pressure but partly by momentum. The counter-recoil spring is compressed by this movement, and pushes the slide forward again, shoving another cartridge into the chamber. The action of this pistol is the most reliable of that of any automatic pistol in the world. But pistol ammunition is comparatively easy to handle in an automatic mechanism, as we have seen, and this Colt mechanism would *not* be at all suitable for high-powered rifle cartridges.

Now let us consider the famous Browning machine gun, caliber .30, Model of 1917, known as the "heavy Browning." It was Colt-manufactured, water-cooled, belt-fed, and issued to our armed forces. I hesitate to describe this action, yet with all its faults and complications it is not as bad as the guns in the gas-actuated class.

The Browning, like the Maxim, has a slidable barrel which recoils about  $\frac{1}{2}$ -inch with the breech block, during which interval the chamber pressure drops. The barrel has an "extension," and the breech block is locked to that extension by the "breech lock." A cam on the bottom of the gun causes the breech lock to be disengaged from the barrel extension after about  $\frac{1}{2}$ -inch of travel. There is a small lever called the "accelerator," which, being a swinging lever in contact with both barrel and breech block, is caused to *accelerate the retraction* of the breech block when one end of this lever is acted upon by the recoiling barrel. In effect the accelerator slows down the barrel to prevent it from banging too hard against the receiver or frame, and at the same time speeds up the breech block.

Residual pressure is not operative in this mechanism. The barrel, being relatively free to recoil, must be slowed down somehow after the breech block has been unlocked. With pistols this is not necessary, because they do not develop so much recoil energy. Why did not Maxim and Browning use residual pressure? Because they could not get the proper timing with high-powered cartridges, and because they would probably have been obliged to lubricate the cartridge cases if they could have done so.

Because all of the above actions involve the movement or recoil of the barrel in the frame or receiver for a short distance (not exceeding  $\frac{3}{4}$ -inch), these mechanisms are said to be of the "short-recoil" type. Practically all automatic pistols above .25 caliber are of the short-recoil type.

Recoil-operated automatics derive their power from the familiar "kick." We have already seen how the short-recoil types work. After the barrel has recoiled a fraction of an inch, the bullet passes from the muzzle. But the barrel and breech block can keep on moving for some distance, unless something stops them. In fact they *could* recoil *past* the magazine.

Suppose, now, that we allow these two parts to recoil *about 4 inches* before unlocking them. Then we rig up some kind of a gadget in the rear of the receiver or frame to disengage the breech block from the barrel. Having provided a barrel-return spring, the barrel alone can then move forward into firing position. We arrange a latch-like gadget to *hold* the breech block so that the barrel can return without it. Thus the empty shell is pulled out. Now we can allow the counter-recoil spring to push the breech block forward. This movement permits the loading of a fresh cartridge into the chamber.

Due to the force of barrel-recoil, it is necessary to use a very heavy barrel-return spring, and a "friction-ring" or brake, as well. Otherwise the barrel will pound the whole mechanism severely. By the time the barrel has recoiled several inches, all pressure in the chamber has vanished. But the great trouble is the *length* of barrel-recoil. For a military rifle it is definitely undesirable. Mounting the barrel is extremely difficult: you have to put a tube around it, and that retains too much heat. Moreover, the arrangement of the unlocking gadgets, the retaining gadgets, etc., together with other complications, leads us to conclude that this *long-recoil* mechanism is far from ideal.

The Browning auto-loading shotgun operates on the long-recoil system. The Remington auto-loading shotgun is based upon a Browning patent. So is the Remington "Model 8" rifle, made in several medium-power calibers. Observe the tube surrounding the barrel on the Remington rifle.

Gas-actuation is next on our list. John Browning produced the first gas-actuated machine gun in 1889, five years after  
(Continued on page 38)



# Three Strikes on Another Alibi

By ELLIOTT JONES

**T**HE "author" is a skeptic. Being skeptical, he took a disliking to "experts" not so long ago, when he met a handful on the wrong road one dark night and inquired as to how to get home. After that we decided to call ourself an "expert."

Now, if there is anything annoying to an expert it is to hear an alibi put forward by a tyro, because experts are supposed to have a monopoly on those things. We can remember one such incident that has rankled all these years. It was at a great armory in New England. The Championship shoot was in full swing. One of the best shooters we know was shooting against us. For no apparent reason he got several low sevens. Now, he was an expert in his own right, and he knew all sorts of things. He knew he had two brands of ammunition in his shooting kit. Every "expert" knows that for each different brand of ammunition there is a proper setting of the sights. This simple fact has been drilled into us ever since the first expert got a low seven. Experts know there are all sorts of barrel vibrations and ignition rates, which raise much hell with your groups.

There are of course other minor things, which even laymen know, like the dipping of the front sight and the unconscious jerk on a trigger, and the changing of ocular focus from the front sight to the target, which cause slight variations of, say, a couple of inches at 20 yards. But our friend, being so well informed after his years of study and his progress to eminence in the shooting world, most naturally deduced it the hard way. He must have switched ammunition by mistake.

So he alibied and said he should have known better than to get that lousy ammunition mixed up with his good stuff, because it always did make him shoot low. He went back to his favorite brand, and got tens. Although we had not decided to be an expert at that time, it struck us that the fellow had probably let off a few sloppy six-o'clock "sinkers," and all he needed was confidence to bring him back again. He talked himself into being confident again by blaming the ammunition. Now that we are an expert, how much more dignified it is to give froth concerning "barrel flip," etc., than to make some such remark as: "Damn it! my front sight sank like an iron balloon!"

Having been impressed by this alibi at the time, and having heard the same sage remark about ammunition passed countless times during the intervening years, we have become so exasperated with the bugaboo, that soon after we had become an expert we decided to run it down.

The big trouble with testing a pistol is that the variable of the human aimer and squeezer usually postpones any definite conclusion about anything. As a matter of fact, it always takes hundreds of shots and most careful observation of averages to form an opinion concerning pistol troubles—and then all you have is an opinion. Sometimes one's best groups are shot with gun or ammunition that is the rankest. Often the best groups don't give the best scores, and not only do shooters have "off" days, but they have "off" moments and "on" moments, and the gist of it is that they can't tell what is what.

The only thing to do was to try our ammunition in a pistol from a machine rest. So we had a machine rest sent up, and installed it in the basement. Then we fired some ammunition which we knew was accurate, and found that the machine rest was perfect, because all the little holes looked like one big one.

So we laid out the Winchester, Remington, Peters, U. S., Western, Sears Roebuck, and Montgomery Ward cartridges. First we shot five of each make to determine the approximate accuracy of the individual brands. We weren't trying to determine their actual comparative accuracy, for we didn't care about that. These five-shot strings showed that they all stayed well within the 20-yard ten-ring, so we put up a fresh piece of paper and proceeded with the great test, itself.

We fired five rounds of one kind and then five of the next, and so on down the list. The groups all coincided perfectly! Then, to be doubly sure, as we experts say, we took five cartridges out of each box and shook them up in a bag, then took them out one at a time, and fired them as they came. The groups were still all on top of one another!

Then we threw in some high-speeds, just for good luck; and all the high-speeds formed a little group of their own off in the corner. However, they at least stuck together.

## "The Amateur Guncraftsman"

By JAMES V. HOWE

**T**HIS 300-page book, published by Funk & Wagnalls at \$4.00, is an amusing approach to the art of amateur "guncraftsmanship." It is patently intended for the rank beginner, suggesting that he start and how he should begin. For real information the reader is referred, throughout this book, to the author's more comprehensive work, "The Modern Gunsmith."

Apparently this shorter and lighter work was written for entertainment and while the author was in a facetious mood. This is deplorable, because as a humorist Jim is out of his natural sphere; and conversely, as one of the outstanding bench men in the country, few if any are more completely endowed than he with gun-building experience and helpful knowledge of the sort whose expression needs no embellishment. It is dis-

appointing, therefore, to find, in lieu of the expected myriad of little facts, a cluttering of rambling expressions and meaningless asides which almost obscure the occasional morsel of information. I fear, also, that all this wordy vagueness detracts from the inspirational value of the author's message.

There is, of course, some real dope buried in the mass of the book which is worth finding; suggestions and cautions about tools and equipment, about pitfalls to be avoided in getting started at making gun stocks, and about gunsmithing in general. There are also a few formulae for cleaning, finishing, bluing, preserving and etching. On the whole, however, the book is more entertaining (and perhaps inspirational) than informative.—F. C. NESS.



# Elementary Metallurgy of Bullet Alloys

By N. W. GOODWIN

**T**HERE have been certain statements appearing lately in books on handloading and in the journals, which I believe give a wrong idea of the true nature of lead alloys.

Lead-antimony and lead-tin alloys do not at any time form what are called solid solutions. They form what are called eutectic mixtures. A eutectic mixture is the alloy proportion which has the lowest melting point of any mixture of these metals. Its melting point is also lower than that of either metal alone. The lead-antimony eutectic is lead 87%, antimony 13%. The lead-tin eutectic is lead 33%, tin 67%.

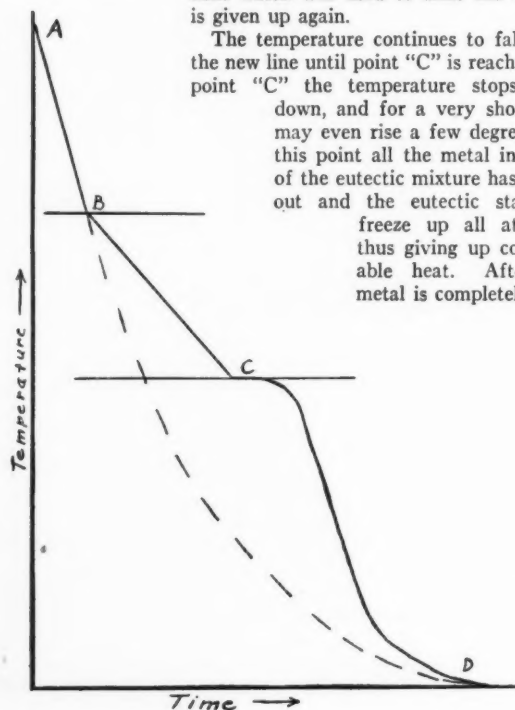
When a eutectic mixture cools from the molten state no crystals of either metal separate out until the instant of freezing, when they both come out at once in a fine close structure.

Let us consider the lead-antimony alloys. Lead-tin mixtures behave in the same manner and need not be considered separately.

Suppose an alloy of lead 80%, antimony 20%, completely melted and cooling at a constant rate. Lay out a diagram, as below, showing temperature drop against time. Starting at "A" with everything in the metal completely in solution, the metal is allowed to cool and the temperature drop plotted against time. The diagram will show a straight line until point "B" is reached. Now, if nothing but a straight cooling down was taking place the line would go on from "B" following the curved dotted line to point "D".

But this is not the case. At point "B" the line will bend: the metal is still losing heat but extra internal heat is being supplied by a physical change taking place in the metal itself. At point "B" the metal which is in excess over the eutectic proportion, in this case the antimony, starts to freeze, forming small crystals suspended in the molten metal. In freezing, the heat which was used to melt the crystals is given up again.

The temperature continues to fall along the new line until point "C" is reached. At point "C" the temperature stops going down, and for a very short time may even rise a few degrees. At this point all the metal in excess of the eutectic mixture has frozen out and the eutectic starts to freeze up all at once, thus giving up considerable heat. After the metal is completely solid



the cooling curve drops more sharply, finally ending at point "D".

In an alloy containing less antimony—say lead 95%, antimony 5%—the above process will be reversed. As the metal cools, lead crystals will form until the amount of lead in solution reaches the eutectic point, when both metals will crystallize out together, enclosing the previously formed lead crystals.

There has been a great deal written about the necessity of stirring bullet metal to prevent the lighter parts from coming to the top. There is no danger of segregation in a completely melted alloy, as it is a true solution. In fact melted lead will even dissolve platinum, which melts at 3200 F.

It is possible to get layer segregation in an alloy that is allowed to cool very slowly, but it is impossible in castings cooled as fast as they are in a bullet mould.

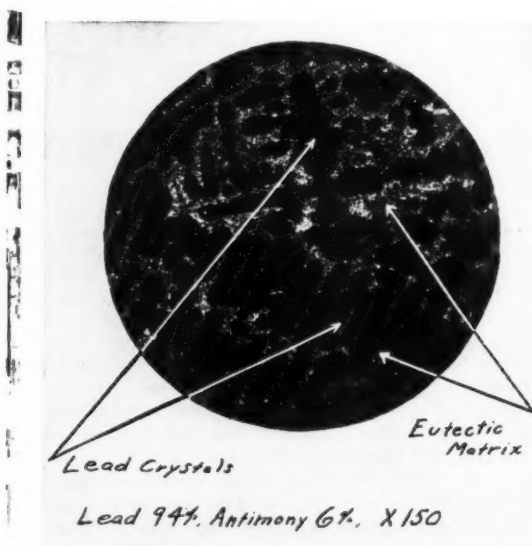
Remember, in any lead-antimony alloy containing less than 13% antimony, or in any lead-tin alloy containing less than 67% tin, the lead will always start to form crystals first and the other metal will not come out until the eutectic mixture is reached. The accompanying photomicrograph shows this structure. The metal is a 6% antimony alloy cast in a small mould in the same manner as a bullet. The dark lead crystals are shown enclosed in a fine-grained matrix of eutectic.

It is possible to determine with a fair degree of accuracy the percentage composition of lead-antimony alloys by their freezing point. This method is impractical with lead-tin alloys as the temperature drop is too small in the alloy range used.

The following procedure will give results accurate to ½% plus or minus on alloys containing only lead and antimony, if the method is carefully followed.

First, calibrate your thermometer (one reading to at least 650° F or 350° C) or pyrometer against pure lead. See that the lead is completely melted; remove from heat and put the thermometer in the metal (it is well to warm the thermometer slowly). Do not stir. The temperature will drop slowly until suddenly the decrease will stop and the temperature may even rise a degree or two. This slight rise is the freezing point and

(Continued on page 37)





# Sporting Arms and Ammunition Developments

By MONROE H. GOODE

(Continued from March issue)

## SHOTGUNS

**I**THACA GUN COMPANY, Ithaca, New York, who for 50 years have produced a line of splendid double and single-barrel shotguns, furnished the most sensational shotgun news of 1937 by producing a new 12-gauge repeating shotgun known as the Ithaca Model 37 Repeating Shotgun.

Ithaca Model 37 Repeater is essentially a J. M. Browning design, but a number of improvements on the basic model were subsequently added by Remington and others, and it was further improved and modernized of late by the up-and-coming Ithaca engineers. Remington produced a 20-gauge repeater known as Model 17 on the Browning design about 20 years ago, and the gun made friends quickly. However, it was manufactured in 20 gauge only and, for reasons best known to the Company, the gun was discontinued. After the Browning patent expired, Ithaca modernized the design and placed the arm on the market.

Ithaca M/37 has a solid breech, the sides as well as the top being made absolutely solid, which gives the shooter full protection against accidents. This solid breech also protects the action mechanism against rain, sleet, snow, dirt, or gravel, which might clog or rust the working parts, and also protects the parts against hard knocks.

The action of the arm is shorter than on some repeaters, requiring a shorter forearm travel, and this in turn enables the shooter to function the gun more rapidly and with less effort. The M/37 is one of the smoothest functioning pumps we have ever shot.

A good feature is the bottom ejection which affords the shooter ample protection against injury in event a shell disrupts, since it would not be thrown in his own or a companion's face.

The crossbolt safety completely locks the action and prevents accidental discharge even though the arm may be dropped on rocks.

Ithaca M/37 has the straight-line feed, which means that the loaded shell is fed from a level platform into the chamber, always a good feature and one that helps to prevent jams.

The stock of the Ithaca is made of high-quality, fine-grained, wavy black walnut, and is well proportioned.

Lightness is one of the cardinal virtues of the gun. With 26-inch plain barrel, it weighs only 6½ lbs.—about right for the upland bird hunter. The Skeet model with 26- or 28-inch barrel and ventilated rib weighs about 7 lbs., and the trap model with 30- or 32-inch barrel, ventilated rib, and recoil pad, weighs 7½ to 7¾ lbs.

Magazine and forearm slide of the M/37 are separate from the barrel, and remain with the action and stock when the gun is taken down. This renders it unnecessary to purchase a new magazine and forearm slide when ordering a second barrel, or makes unnecessary the laborious removal of magazine and slide from barrel. A second barrel costs very little, and this type of gun is easily dismounted.

The Ithaca repeater affords a combination of features not exactly duplicated in any other pump gun: smooth functioning, light weight, simplicity, bottom ejection, and good materials

and workmanship. These qualities are destined to push the M/37 Ithaca into the front ranks.

Ithaca were unable to fill all their orders for the gun in 1937, and the arm bids fair to be one of their best sellers in 1938. The fame of the new gun has spread to the point that many have been sold to Englishmen in merry old England, where repeaters have never been popular. They have been ordered from many foreign countries already, and the Canadians took to the Ithaca repeater like ducks to water.\*

*Savage Developments.* Savage Arms Corporation, Utica, N. Y., one of the world's largest makers of firearms, placed on the market two popular priced over/under shotguns and a very low priced, single barrel shotgun.

Savage M/420 over/under shotgun is a hammerless takedown gun with welded barrels and is fitted with two triggers. An unusual feature is that the barrels are cocked by a top lever which is pushed to the right, the barrels opening of their own weight. Barrels are bolted to the frame with a sliding lock bolt located between the upper and lower barrels. Savage claims that this method of bolting close to the heads of the chambers of the barrels insures positive lock-up and equal distribution of pressure from both barrels on the locking lugs.

The arm is made in 12 and 20 gauges. Barrel lengths: 12 gauge, 26, 28, and 30 inches; 20 gauge, 26 and 28 inches.

The stock is made of selected black walnut with full pistol grip without checkering. Weights: 26-inch barrels, 7¼ lbs.; 30-inch barrels, about 7½ lbs.

Savage M/430 over/under is the fancy grade of the M/420; otherwise, the specifications are the same. Special features of the M/430 consist of matted sighting line on top of barrel; a stock of selected, crotch walnut, fluted comb, full pistol grip—all nicely checkered; butt fitted with Jostam anti-flinch recoil pad.

Savage M/220 single barrel shotgun is a crudely constructed but hard hitting utility gun designed for persons demanding a simple but strong gun retailing at an extremely low price.

M/220 is a hammerless, automatic ejector, takedown, made in 12, 16, 20, and 410 gauges. Barrel lengths: 12 gauge, 28, 30, and 32 inches; 16 gauge, 28 and 30 inches; 20 and 410 gauges, 26 and 28 inches. All gauges are bored full choke.

The 12 and 20 gauges are chambered for 2¾-inch shells; 16 gauge, 2-9/16-inch shells; and 410 gauge, for 3-inch shells.

*28 Gauge Winchester Pump.* Winchester announced, late in the summer, that their well known Model 12 Repeating Shotgun would henceforth be chambered for the 28 gauge shell in addition to the 20, 16, and 12 gauges. Clearly, this gun should have been made in the 28 gauge long ago, as the 28 gauge is a better balanced load than the 410 gauge. It will be well received by small game and upland bird hunters and by Skeet shooters.

The new 28 gauge repeater is chambered for the 2¾-inch shell, and is made in various styles with 26- and 28-inch barrels of usual borings and with the customary extras.

\*NOTE: The Ithaca Gun Company has just announced that effective June first, the Ithaca M/37 will be in production, with two styles of 16-gauge shotguns: one a featherweight, standard grade field gun, which with 26-inch barrel weighs only 6 pounds; and a special Skeet and game gun with large fore-end and rampless ventilated rib. The standard grade will be furnished with 26, 28, and 30-inch barrels, and the Skeet grade with 26 and 28-inch barrels.

(Continued on page 35)



# Making Them Shoot

By M. A. COOPER

**S**O YOUR small bore match rifle isn't accurate enough to give you a chance in a match? That's bad. But, what will it average, for five 10-shot groups, at 100 yards?

You don't know? Well, it's easy to find out if you can just get a still day. But first, one more question: What sort of groups can you hold and squeeze for, in the regular prone position, at 100 yards?

You can get the answer to the first question—what your gun is capable of—in various ways. The simplest is a muzzle rest, used prone. The next simplest is a bench rest. The best, if you have a good one, is a *proper* machine rest. Any of these three testing devices have GOT to have one thing—a really still day. It seems as though a machine rest is, of the three, most affected by wind; the bench rest next, and the prone muzzle rest least of all.

A muzzle rest can be a box, a log, or anything reasonably steady, with something soft on top. A rolled sweater, a shooting glove, a rubber garden pad—whatever's handy. Of course, you rest your barrel on the pad or whatnot, and put your left hand, fist doubled up, under the toe of the stock. You double your fist tighter to raise the stock, and the opposite to lower it. However, if you can get smaller average groups by any other method, use the method by all means. "There ain't no rules." When you get five ten-shot groups measure them to "outside centers" (that's the distance between the centers of the outside shots in each group), and figure the average spread. Also note the *biggest* group in the series. Pay no attention to the smallest group. It may be luck, and if it is really small, well under an inch, you probably can't hold for it in a match, certainly not if you shoot like I do.

Well, we'll say that you've got your five groups and that the best that your gun will do from a rest is an average of  $1\frac{3}{4}$ " for the series. Let's look at those groups. Never mind the smallest ones, they'll take care of themselves. What's that biggest one— $2\frac{1}{4}$ "? Not so good. Won't make a possible on the 2" 100-yard bull with any sort of holding. However, seven of the shots in the biggest group are in an inch and a quarter, and here's a hopeful sign: four of those seven are practically in one hole. That's always encouraging when a gun "punches a hole." Generally if they'll do this they can be improved quite a bit without a major operation.

What's that, you need a new gun or a new barrel? How do you know? There are some simple "home remedies" that I would try first if it were my gun. Right here on the range, if you have a screwdriver in your kit. And don't turn up your nose at these kinks. Some of them have really worked for me. For instance, the heavy Addicks 52 that shot the machine rest groups listed on page 29 of the January, 1938, *RIFLEMAN*, had not been shooting particularly well, and sometime before shooting these groups it had done so poorly that I had put a shim of paper under the rear end of the receiver—whereupon it mended its ways and averaged 1.10" for forty-five consecutive 10-shot groups!

Well, here goes. First, tighten up the front receiver screw. How tight? Well, don't bust the head off the screw but get it pretty tight. About halfway between darn tight and d—n tight. Try the gun, muzzle rest, like that. If it really shoots better be thankful, and **LET THE GUN ALONE**. Don't tinker with it as long as it shoots well.

But maybe this hasn't helped any. All right, turn 'er bottom up and loosen that receiver screw. Touch both tip of forestock and the adjacent barrel, while you are loosening it, with thumb

and forefinger. (You can detect a very slight movement of the barrel against or away from the forestock this way.) Maybe as you *loosen* the receiver screw the forestock *tightens* against the barrel. (It's not supposed to, but sometimes it does, doggone it.)

If it does, then your stock needs rebedding. But maybe you are like myself, too lazy to try it, and anyway, you're on the range and anxious to get that gun to shooting. If so, try slipping a piece of paper between the forestock and the barrel, extending from the tip back about an inch. Ought to be thick enough so you can't pull it out when the receiver screw is tightened up.

Now, test out this combination. And once more, if it *shoots* **LEAVE IT ALONE**.

But maybe the darn gun still won't make passable groups. Restrain the impulse to bend it around a tree. Even the best of match rifles behave this way sometimes.

Next, try and see if you can shove a piece of paper between the rear end of the receiver and the stock. Never mind if it *was* tight against the wood the day you bought it. Queer things happen to guns, and stocks warp and bend. If you can get that paper in, then loosen the receiver screw (or screws) and put in a much thicker piece of paper so that it *can't* be pulled out when the receiver screw is tightened again.

A last trick is to vary the tightness of the upper band. If your gun has the conventional 52 band that goes around both barrel and stock this is going to be difficult. However, last November, P. E. Hotchkiss, of Champaign, Ill., spent the day with me on his way to Florida and we tried his heavy 52 in the machine rest. The gun had such a band but we put a small clamp on it, just ahead of the upper band, thus making it possible to adjust the pressure of the barrel against the stock. My recollection is that this improved the shooting of this gun, but unfortunately I cannot locate the sheet giving the groups which he was kind enough to send me.

If you get the gun to shooting well leave it alone, no matter what defects are apparent. I've seen some groups, darn good ones, too, shot from guns on which a great many things were plainly and clearly wrong.

The same day that we tried Hotchkiss' gun we also tried my first and only attempt at cutting off and rechambering a barrel. I'd seen Mr. Addicks do it, but soon found that it was a devil of a lot easier to watch than to do. However, I got the gun back together and it shot a 50-shot series which averaged 1.13", much to my delight and amazement. Took it down to the Atlanta Rifle Club's 50-shot 50-yard indoor match and got a 50-shot possible with 41 X's. This was the best I'd ever done (or hope to do), but I'll be jiggered if Menzen didn't win the match with a possible and 48 X's, Hamby second with a possible and 45 X's, and Norman third, possible and 43 X's, and all these three men shot the same gun (Menzen's). But listen to this: this gun of Menzen's, which is just plain poison in a match, when checked up showed a number of "defects," if you could call them that in so accurate a gun!

For example, the headspace was too big, the firing pin protrusion was too small (and either of these defects makes the other worse), and, moreover, the firing pin was noticeably battered up at the front end! The mainspring was apparently weak, and a heavy forestock band, fastened apparently to the sling swivel, bound the barrel tightly to the stock. In short, that gun is probably more deficient in *all* these vital adjustments than your gun is in any *one* of them.



# A Review of Recent Tournaments

## I

### THE MID-WEST CHAMPIONSHIP MATCHES

**T**HE thirteenth annual program of the Mid-West Championships opened in the Drill Hall of Fort Hayes at Columbus, Ohio, on February 25 with officials ready to accept entries from early comers and with the inevitable sleet storm and snow making itself felt all over the middle west. In spite of inclement weather the entry list was swelled before the matches were over to a total of 246, a new attendance record for this annual meet.

This year for the first time the shooters of Ohio were classified into three classes based on known shooting ability. Not only was this innovation well received by the shooters but probably because of the classification system, the number of entries in each match was in most cases far ahead in proportion to the registrations as compared to previous years.

Some familiar faces were missed and some others were in attendance who did not compete. Conspicuous among the latter was V. J. Tiefenbrunn, who last year took the Tewes Trophy Match with the score of 300 plus 1499. Conspicuous because of their absence were a number of the Zeppelin boys from Akron. For the first time since the author has been attending these matches it was possible to be comfortable in the drill hall toward the end of the matches. No smoke and no odor to speak of. A far cry from the old days when one could barely see the targets through the blue and green haze. Now all this is changed because only about three shooters out of each thirty on the line are shooting lesmok powder and it does not seem to be any handicap. Most of the shooters have found some brand of smokeless which shoots accurately in their guns and everybody has benefited.

The Columbus Trophy, feature event of the program, was taken by Eugene Huff, of Massillon, with a three position score of 290. This barely outranked Perry Grossklaus, of Navarre, who turned in an identical score in *each* position but was outranked on his last bull's-eye standing. Third place in this hard-fought match went to Art Burtcher, of Toledo, who turned in a 289. Other high ranking scores were fired by J. H. Hoopes, of Zanesville, and R. P. Wilson, of Galion, Ohio, both Class B shooters and each of whom turned in scores of 95 for the standing stage. Noteworthy in this connection was the score of Mrs. W. R. Rinehart, of Galion, who won third in Class B with an excellent 284 and who in so doing out-shot her husband (a Class A shooter) by one point.

The Tewes Prone Match, 30 shots (iron sights), usually distinguished by many possible scores, was this year won by a lone possible. None of the 104 entrants had turned in a 300 score until about 3 p. m. Sunday when A. E. Hart, of Cleveland, grunted his way through the course and wound up with the only 300 of the meet. Second place went to beautiful junior shooter Marjorie Llewelyn, of Cleveland, whose 299 was better than that turned in by Fred O. Eakins, Jr., of Columbus. Other 299 scores were fired by William Sayrs, of Cincinnati, and Capt. Perry D. Swindler, of Xenia, who likewise placed high in this event.

The Mid-West Championship, aggregate of the two preceding matches, resulted in a three-way tie—Huff of Massillon, Grossklaus of Navarre and Burtcher of Toledo finishing with 587 and ranking in the order named. Fourth and fifth places went to R. E. Baughman, of Zanesville, and L. E. Klein, Massillon. J. H. Hoopes was tops in Class B.

The Mid-West Metallic Sight Championship found a startling

number of iron sight shooters going on the line in search of the Mythical Championship. And of the 59 shooters who tried this three-position course there were ten who scored 280 or better. First was taken by Scott Romig, of Urichsville, whose 287 set a new record for the match. Earl E. Rinck, West Alexandria, and J. D. Brown, Akron, both beat the former record, while L. E. Klein, who placed fourth, equalled it with his 285 score.

Match 5 was composed of those shooters who stand up on their hind legs and do their shooting. Vernon Wood, of Zanesville, was the hardest holder of this group and his score of 186 was good for first place. Second was Art Burtcher, Toledo, with 185, and third place went to Earl E. Rinck.

Match 6 was the Junior Match divided by age into two classes. First place in the older group was won by the above mentioned Miss Marjorie Llewelyn with 272 for three positions. Second, two points behind, came Roger Hughes, winner in 1937. The younger class of juniors was led by young F. E. Gierhart, Jr., of Columbus, who made a 270 over the course. The Junior Position Match was won by Fred Merrill, of the O. S. & S. O. Home, at Xenia, with 197. In the younger group Gierhart, Jr., again took top honors with a 195.

The three-position match between ten-man teams of Connecticut and Ohio resulted in a victory for Connecticut by a really overwhelming score. The Ohio team scored 2798, an average of 279.8 per man. The Connecticut team set a mark to shoot at for some time with an astounding 2846, an average of 284.6 per man. Eric Johnson captained the Connecticut team and guaranteed the Connecticut shooters a victory. We will subscribe to the proposition that Eric's guarantee means just what it says. Another year is coming, however. The Junior Match vs. Culver resulted in a victory for Culver—score 1970 to 1951. Other special events were fired but opponent scores have not yet been received.

Other highlights and winning scores—the return of Larry Wilkens whose attempted comeback was marked by the same old buck fever which has caused all of us trouble when trying to pick up competitive shooting where we left off; the third successive win of the Senior Match by old timer Aaron R. Smith, who seems to have a lease on this event; winning of the American Legion Match by Walter Sarver, who lost this medal last year on a close double; the consistently good shooting of the aforementioned Mrs. W. R. Rinehart, who also took the Women's Match medal with a 282; the triple tie in the Railway Match which found Randall, Farris and Kelly ranked in that order on identical totals; the usual good shooting of pistolier R. C. Bracken, who besides copping the National Match Course event, took home the trophy for the Mid-West Individual Slow Fire Pistol Championship; the similar showing made by the Columbus Rifle and Pistol Club team which, led by Bracken, walked away with the four-man team match while the Ohio State University Team was winning Tyro honors in the same event.

As in past years the success of the Fort Hayes Tournament was due in a large measure to the wholehearted cooperation of Ohio Rifle and Pistol Association officers and directors, many of whom passed up the opportunity to shoot in order to help run off the matches. Their services were augmented by genial, efficient Capt. Henry M. Smith of the Adjutant General's office, who, as range officer, pleased the competitors with his usual fair but firm enforcement of the rules. Others present in the interest of the firms represented were L. Q. Bradley, of the N. R. A.; Frank Kahrs, of the Remington Arms Company; V. Z. Tiefenbrunn, of the Western Cartridge Company, and Mr. Zockmeyer, of Winchester.—F. L. SPENCER, SECRETARY.



## II CONNECTICUT GALLERY CHAMPIONSHIP

Did you ever hear of a golf tournament with over 1100 competitors? No! Did you ever hear of a tennis tournament with over 1100 competitors? No! Did you ever hear of a gallery rifle match with over 1100 competitors? YES!

Exactly 1142 competitors actually fired in the tenth annual gallery rifle championship matches of the Connecticut State Rifle and Revolver Association, held on the Winchester range in New Haven, Conn., on March 4, 5 and 6. Shooting started at 6:00 P. M. Friday and ended as per schedule at 5:30 Sunday afternoon.

In the senior division, teams consisted of 5 shooters, with each competitor firing 5 shots from standing, sitting, kneeling and prone. Junior teams and individual juniors fired ten shots standing and ten shots prone.

The summary of competing units included 105 senior teams, 11 women's teams, 86 junior teams, with 25 individual seniors and 107 individual juniors also firing as unattached competitors.

There were medals and cash prizes galore. Besides the 54 regular place medals, over 400 gold medals were presented to boys and girls by the Lyman Gun Sight Corp. of Middlefield. You never saw so many medals at a single match and it was a real treat to observe the enthusiasm of the medal winners, particularly the juniors who lost no time in applying for their prizes as soon as the scores were posted.

From the village of Middlefield, the chief industry of which is the Lyman Gun Sight factory, there appeared a total of 85 shooters—most of the village must have come to the range to shoot and cheer for their teams. From the Brass City of Waterbury came 16 five-man teams, a splendid showing. Others had almost as many.

To be on hand at the range Saturday and Sunday as group after group of shooters came in, registered and awaited their turn to shoot was to witness competitive rifle shooting at a new all-time popular peak. All during the day and far into the night the shooters gathered around the huge score board to see the revised standing and discuss their own scores. Interest ran very high during the entire match.

Some interesting highlights of the match included the familiar Elihu Lyman, wearing a "big ten gallon hat", chasing juniors to the firing line; Major John (Host) Hession, who was on hand to see that everyone had a good time; Kathryn Cooke, daughter of the Secretary of the Association, who captured her first junior medal; last but not least, hard working Russ Lent, who dressed in a combination uniform was mistaken successively for a messenger boy, army officer, delivery truck driver and Greyhound bus driver.

When the last score was posted and the standings verified it was found that an outside (of Connecticut) team had turned in the highest total score. This distinction went to Richmond Hill (N. Y.) Rifle Club, whose team fired a score of 929 to win top honors. Second place and the Championship of Connecticut went to Quinipiac of New Haven, on a score of 927 points. Other high scoring teams, all of them prize winners, were Enfield Rifle Club of Thompsonville, score 923; Papco Rifle Club of Paterson, N. J., score 921; and Capitol City of Hartford, score 913; Enfield Team No. 2, and Silver City Gun Club of Meriden, both 911.

Highest individual and Gallery Champion of Connecticut for 1938 was Carl G. Johnson of Springdale, who totaled 192 points. Edward Giemza of Middle Haddam was second high with 190, while third place went to Ward C. Hunt of Woodmont, score 189. H. J. Steinberger of Richmond Hill won high gun individual honors for non-Connecticut shooters. His score, 191.

The Women's Championship went to Katherine V. Chodan of Hartford with 184 points, while the Women's Team match was captured by Middlefield Girls Team No. 1 on a total of 869. The Wethersfield Girls scored 860 for runner-up honors.

In the junior division three Brooklyn (N. Y.) teams finished one, two, three. First and second places were won by Brooklyn Technical High School teams on scores of 890 and 863, while Poly Prep of Brooklyn copped third place honors, scoring 861. The two high Connecticut teams were Warren Harding Hi of Bridgeport with 837 and Sons of the Legion at Manchester, score 821. The highest scoring individual in the junior match was Edward Kirkby of Pequabuck, with 185.

Tournament officials responsible for the smooth functioning of the Nation's largest indoor shoot included Russ Lent, Executive Officer; Harry Anthony, Cecil Brooks, and George Parkin, scorers; Herb Dingee, R. Lent, Jr., Louis Albergh, John Yetter, Howard Varley, Capt. A. J. Griffin, Elihu Lyman and others, Range Officers. Among the many visitors who attended were H. H. Goebel and F. A. Moulton, representatives of the N. R. A., Major John Hession of Winchester, Tom Davis and Gail Evans of Remington, Henry Lyman of Middlefield and Gene Mitchell from the V. H. Blackinton Medal Company.

The officers of the Association had hoped to have at least 1200 present, but Saturday morning dawned with a heavy wet snowstorm in progress, later turning to sleet and rain which caused ten teams to send word they would be unable to attend. Next year we are looking forward to over 1500. "Watch it grow", says Elihu Lyman, "in another five years we will probably have five thousand shooters at this match."—EDWARD E. COOKE, SECRETARY.

## III

### METROPOLITAN RIFLE CHAMP

As Mrs. Jimmie Hilborn remarked after having dropped her last record shot into the nine ring, "That's the first wifely thing I've done for Jimmie in years." And there is the perfect alibi. As to what the other one hundred and thirty competitors had to offer, Husband Jerry wasn't concerned. He'd take the championship, thank you, and you can keep your alibis.

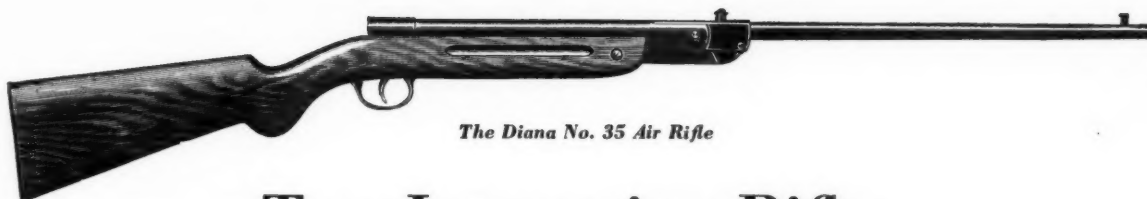
Thus with the only perfect score of 500 x 500, Jerry Hilborn of Bronxville, N. Y., defeated one hundred and thirty-one of the hardest holders in the East (Buffalo included) to win the 17th Annual Indoor Championship of the Metropolitan Rifle League, Inc. This match is, as you know, fired indoors at a range of one hundred yards at a four-inch gray bull's-eye with the regulation N. R. A. scoring rings. (The gray is used to enable the shooters to spot their shots more readily.) Second place was won by J. C. Lippencott of the Union City Rifle Club of N. J. with a score of 499, outranking eight similar scores. S. J. Vitrano of the Roslyn, Long Island, Rifle Club was third, and T. Fakelmen, also of the Union City Club, was fourth. Down in fifth place was slinging Sam Moore of the Madison, N. J., Rifle Club. After knocking the X-ring out of his sighting target, Sam slung his first shot for record out for a wide nine and then ran his next 49 shots clean.

Scores were exceptionally low compared to the results of the last two years when the winners had to rank half a dozen or more possibles. Despite the individual reputation of the members of the assembled group, Old Man Buck Fever took a heavy toll. The most popular alibi was based on the fact that a window down near the pits was open and that the cold air entering and striking the warmer air inside caused a slight distortion and thus subsequently accounted for the unaccountable nines. Yet that same window has been open for most of the previous matches. Then too they had a better alibi in those days—they could always blame the ammunition.

Two 10X possibles were turned in during the day, one by H. D. Allyn of Springfield, Mass., and the other by C. C. Held of Allentown, Pa. Bill Breuler of New Haven, in 13th place with a 498, won the annual award of one of Len Miller's new chapeaus, and Bill Bryan gained the doubtful honor of having traveled the farthest (Texas' pride having gone home), coming all the way

(Continued on page 36)





*The Diana No. 35 Air Rifle*

## Two Interesting Rifles

**Diana No. 35 Air Rifle**, of German make, is one of the most powerful and easily-operated air rifles that we have used. No air valves are employed and no pumping is required to furnish the power required to penetrate about  $\frac{1}{2}$ -inch soft pine at about 10 yards. A single break-down motion of the barrel cocks a powerful spring and plunger which supplies the air pressure when released by the trigger. The latter is adjustable from a light, single pull to a two-stage military pull.

The No. 35 Diana is more of a man-sized rifle than a number of our .22-caliber rim fires. The amply-proportioned, polished, walnut stock is  $13\frac{1}{4}$  inches long, from trigger to steel buttplate. This 6 $\frac{3}{4}$ -pound rifle is  $43\frac{1}{2}$  inches long with a 19-inch, light, rifled barrel. The heavy spring-and-plunger mechanism is  $11\frac{1}{4}$  inches long which accounts for the favorable overall length and weight. All metal parts have a smooth blued finish. The No. 35 Diana is made in both .177 caliber and .22 caliber, for regular, skirted, air pellets.

The sample .22-caliber air rifle did not prove as agreeably surprising in accuracy as it did in power. It is, however, handicapped by its open-type sights. The Rocky Mountain rear sight is adjustable for elevation. The poor-shaped, knife-blade, front sight is too narrow for practical shooting. We would prefer a square-top post for a front sight and an aperture rear sight.

The best we could do with the open sights, shooting from a good rest, was 1-inch to  $1\frac{1}{4}$ -inch 10-shot groups at 50 feet, using the "Hy-Score" English pellets, sent in with the rifle. Several other makes of pellets gave nearly as good groups. At 50 feet nearly all pellets would stick in a hard, seasoned, yellow-pine board. The pellets were badly mutilated, which demonstrated the ample power of the rifle. It would penetrate both sides of thin tin cans at this range.

Next to the inadequacy of the sights, the greatest anticipated objection to this air rifle might be the \$25.00 cost, although it is of man-size, nicely finished and has a good 12-groove barrel. S. E. Laszlo, Importer at 317 Broadway, New York City is the sole U. S. distributor for Diana air rifles, Hy-Score air pistols, Bulldog and Hy-Score pellets.

**M-67 Junior Winchester** is an important rifle for training small kids with the .22 Short, CB and BB caps. It is the M-67 (.22 L. R. chamber) with barrel cut down to 20 inches and butt as short as 12 inches. It has open sporting sights, but deserves the target type.

The "Last Word" Powder Measure was sent in by Mr. J. O. Lemaire of Detroit Loading Tools, 7332 St. Paul, Detroit, Michigan. It is made to throw variable powder charges from the lightest to the heaviest used in handgun cases, and small-capacity rifle cases like the .22 Hornet. The sample proved to be quite accurate with

a number of fine-grained powders, including Unique. The latter gave the greatest variation in charge which was nearly

.2 grain. The extreme variations with other powders were: .15 grain with Bullseye, .1 grain with No. 5 and about .15 grain with No. 4227. The full capacity of the sample measure is 10.5 grains Unique or Bullseye and 13.4 grains No. 4227. The charges were weighed on a No. 980 Brown & Sharpe scale, which is the Modern-Bond No. 80 Improved Powder Scale.

Powder charges are varied by using thin brass discs to reduce the depth of the charge-plug chamber. These washers are held in place by a screw, threaded into the bottom of the powder chamber. Discs are added to reduce the charge. It is necessary, however, to use powder scales to set the measure for a given charge or when changing to another load. The correct charge is obtained by the trial method or by varying the number of filler discs. This is somewhat inconvenient, and the measure is at its best when left fixed and used for a single charge. We settled on a charge of 4.7 grains No. 5 for our .45 A.C.P. load. This setting also gives a high-velocity load of 6.1 grains Unique, (for new factory components and only in heavy .38 Special revolvers of modern manufacture), and 5.3 grains Bullseye which is a moderate load for the .45 Colt cartridge.

This measure has several desirable features which are not found in most powder chargers. Two oval shaped slots in the large brass hopper, which is lined with an "Acetate", a form of fire-proof celluloid, permits a visual check of the powder supply. We did find, however, that powder would stick to the more-or-less tacky surface of the "Acetate" lining much more persistently than it would to the plain-brass or steel hoppers of other measures. There are also ports for visual check in the outlet funnel through which the operator can readily detect a hang-up. These are near the mouth of the outlet tube. Still another good feature is the adjustable bracket which supports the measure. It permits fastening either to the side of a wall or the top of a work bench. The measure may be readily removed from its split-bracket holder or rotated to any convenient position, for either right or left-handed operators. The cylindrical charge-plug is retained in the aluminum body of the measure by a spring-backed plunger. Another feature of the "Last Word" measure is the free-flow provision consisting of two crossed wires inserted in the feed opening of the hopper. This, of course, is to prevent powder packing. The measure sells for \$4.50, plus 14¢ tax, when furnished with the visual-check ports in the discharge tube and hopper. The plain model costs 50¢ less.

About a month ago we received from Mr. Lemaire a sample of gun lubricant called "Target". We have been using it in rifles as a rust protector and have also started a rust test with it. So far, it has given complete protection to the rifles and to a polished razor blade placed on a brine-soaked patch. The lubricant is a composition of colloidal graphite, a rust preventive and a grease which melts at low temperatures. It is furnished in small tubes selling for 25¢ each.



*The New Winchester .22 Rifle for Juniors*



## THE .220 SWIFT

By E. D. WRIGHT

OVER a period of twenty years I have owned, shot, and experimented with not less than thirty of the best rifles that I could find. Some were of high-grade factory manufacture, while many were custom-made, but the two .220 jobs I now possess are the best that I have ever owned or shot.

This .220 cartridge case is the strongest, and in my opinion the most useful, that we have today. The .220 Swift was intended primarily for long-range high-velocity shooting on medium-sized animals, and I think that its use for small-game shooting has been overlooked. My experience with it has been that when properly loaded it is perfect for all small game such as rabbit, squirrel, crow, hawk, chuck, etc., as well as the big game of the United States.

For the finest accuracy and complete satisfaction for small-game shooting, it is necessary to have a special hand-made tight-fit chamber, and the case necks reamed central and with uniform wall thickness.

I have two rifles for this case, fitted by William H. EuDaly, of Seymour, Indiana, with his perfect tight-neck chamber, and reamed cases to go with it. One rifle has the 1917 action, with 24-inch barrel, 12-inch twist, and .224 groove diameter. The other rifle has Remington bolt action, 23-inch barrel, 12-inch twist, and .223 groove diameter. EuDaly is a most precise rifle mechanic. He takes .220 cases and reams the necks to exactly uniform wall thickness, then chambers the rifle so that the cartridge is a tight fit overall, and central and in perfect alignment with the bore. No resizing of any kind is necessary. This not only reduces the number of reloading operations, but eliminates working the case metal, which shortens its life. Both these rifles make dime-sized groups at 50 yards. They are capable of smaller groups, but my holding is not.

The scopes I use are 2¼-power Zeiss Zielklein hunting scopes with picket-post graticules. For small-game shooting up to 40 or 50 yards, I use 3 grains of pistol powder No. 5, and a 45-grain alloy blunt-nose bullet lubricated and sized .2245. This load is a killer on small game, and does not mangle the meat. The report is about like that of the .22 long rifle. For a 100-yard small-game load I use 7½ grains of pistol powder No. 5 and the 45-grain soft-point jacketed bullet.

In *Outdoor Life* for January, 1937, there is a report by Maj. F. T. Chamberlin on the effect of the .220 Swift maximum loads on mules. It seems that the stopping power of these loads is equal to that of the .30-'06. In the May issue of *THE AMERICAN RIFLEMAN*, in the report on bear, rams, caribou, and moose shot with .220 Swift full loads, the killing power would appear to be as good as that of most any other caliber.

The .220 EuDaly tight-chamber job gives a most accurate all-purpose rifle that is good for anything from mice to moose.

## THE NATIONAL MID-WINTER CHAMPIONSHIPS

(Continued from page 13)

Westfall's name was on top of the list in only one individual event, and that was the special Sniper's Match which was placed in the program as a Bingo game to afford noontime diversion for the competitors, but he was barking on the heels of the winner of almost every event and ended the meet as the big money winner. Victor Wehle, the amiable toastmaster, upheld the honors for the natives by landing in second place behind West-

fall in the championship. He received plenty of support from other Floridians, especially Ed Comer, who for a couple of days threatened to be the people's choice for the championship, and T. F. Bridgeland, who is almost as good as a competitor as he is in his more usual role of tournament manager. Most of the credit for the development for this tournament is due to "Mike," who has spent many hours planning the range and the program and is in active charge of all arrangements until the command "Commence firing" is given for the first match. From then on he is one of the most feared competitors on the line.

Much of the sparkle and luster of this tournament comes from the series of special events which are inserted into the program at odd moments by the Match Committee (meetings called hourly behind firing point 37 or in front of the statistical office or at any other prominent point where two of them get together). Besides the Infantry Match, which called out more spectators and more telescopes than any other event, and two or three "Bingo" matches, in which most of the entry fees are returned to the shooters who place eleventh or sixteenth, the Yankees and Rebels each year stage a rehash of the Civil War. The Yankee banner very proudly floated in the breeze in front of their camp, but even this lucky omen was not enough to win the skirmish for General W. T. ("War is Hell") Hansche from the forces of General Fitzhugh Van S (Lee)n. Since the Yanks were in Rebel territory they were considerably outnumbered but they refused to use that as an alibi for their defeat.

One of the Yanks demonstrated his total disregard for Rebels' feelings about their weather by bringing with him a pair of rubber overalls which are designed to keep moisture from reaching a man's trousers either from the above or from the damp firing line which results from a sudden Southern shower. He had but one opportunity to make use of this efficient garment and was much pleased with his foresight when the shower had subsided and he was the only man on the range who was completely dry from head to foot. Vincent was not sure whether he should credit his good fortune to his own Yankee ingenuity or to the fact that his horoscope showed that that day was *his* day. Unfortunately his ardor was dampened just after he had removed his peculiar garment when he sat on the running board of his partner's car to remove his rubbers. He finally decided to credit the horoscope with an assist when the bulletin showed him to be winner of the match that ended in the rain, but even that theory was blasted on the following afternoon when he again found himself winner of a match—even though the horoscope proclaimed that his day was done.

The matches also provided another trial of the 100-yard International target whose possibilities have been interesting shooters all over the country. The trophy for this event was provided by Thurman Randle who announced at the end of the first stage that he would also include a trip to Cuba for any person who was able to fire a 20-shot possible on the target and a trip to Europe for the first "X" scored on it. He had learned by that time that most nines on this target would be tens on the regular target and that the multiplicity of numbers on the bull's-eye made it exceedingly difficult to even attempt to spot the location of bullet holes with even the powerful telescopes that are now commonly found all along the ordinary firing line.

Colonel Benjamin W. Mills, the Director of Civilian Marksmanship, served efficiently as Executive Officer for the matches. With the co-operation of his assistants he was able to keep the tournament running smoothly and on time so that not a single protest was filed by any of the competitors. General Reckord, Executive Vice-President of the National Rifle Association, was also able to attend the last two days of the tournament. This was his first official visit with the shooters in this corner of the country and he brought to them the latest available information about the National Matches for 1938 and about the new developments in the seemingly interminable struggle over the Federal registration of firearms.



## ERROR OF AIM WITH SCOPES

(Continued from page 15)

the 2½X Belding & Mull, the 2¼X Zeiss Zielklein, and my special, long-eye-relief, 2¾X B.&M. The error of aim ranged from .405 inch to .535 inch, with an extreme difference of .130 inch at 100 yards. As a matter of interest we also tried sporting metal sights, a bright gold bead and a big, stem aperture (without disc), on this target, getting an average of .675-inch error.

The post reticules were also tried on the standard small-bore target. Oddly enough, two 2¾X Weaver scopes bracketed the group, this model being first as well as last, but the maximum difference was very small—only .060 inch at 100 yards. We also tried metal target sights for comparison on this target, using a Redfield hooded front sight and a .05-inch Watson eye cup in the rear peep. The light condition was at its worst for any metal front sight, and, consequently, the error we obtained represents the extreme. With the front post our average was .570 inch and with an .05-inch front aperture, .490 inch. We also tried a 10-inch post in a 1½X scope, and had a comparative error of .775 inch at 100 yards. We also tried a 10-inch pistol with good square-type target sights on the small-bore target at 100 yards. The 6-dot average for the two shooters was 2.43 inches. The average triangle was 1.98 inch.

For those who would know, the mean error or average spread of the four triangles, comprising the twelve dots obtained with each different sight, was appreciably smaller than the average spread of the two six-dot groups, which latter were used for obtaining the relative ratings already given here. On this basis of individual triangles, made by the two shooters, the ratings were also somewhat different.

For example, on the standard small-bore target the best target scopes (all with fine cross hairs) averaged (four triangles each) .108, .163, .185, .223 and .228 inch at 100 yards. The 7X B.&M. scope led, with the 10X, 15X, 8X and 8X following in order. On the V.H. target a dozen cross-hair scopes averaged better than .228 inch, and the 8X Jr. Targetspot led with a triangle-average of only .100 inch, followed by a .105 inch for the 4X Marlin No. 2 scope. The 4X Hensoldt Dialytan and the 4X Unertl tied for fourth place with an average of .148 inch. In order, all sixteen of the cross-hair scopes ranked as follows: 8X, 4X, 10X, 4X, 4X, 15X, 4X, 6X, 7X, 3X, 8X, 3X, 4X, 4X, 3X and 5X.

An idea as to the size and shape of our triangles, as compared with the spread and formation of the six-dot groups, may be had by viewing some of the exact reproductions which accompany this report. It will be noted that displacement of the zero between successive triangles makes the six-dot group considerably larger than the larger of the two triangles. Thus, when we compare triangle averages we must also consider the largest individual triangle of the four obtained with each sight. Referring to the cut which shows the groups and triangles, we see here typical six-dot groups and their two triangles as obtained at 100 yards on the small-bore target using various different sights. Those in the first vertical column (plain numerals) are all 6-dot groups. Second and third vertical columns (sub-lettered) show the two 3-dot triangles which comprise the respective 6-dot groups shown in the same horizontal row. All groups are shown exact size and as obtained. Those in the first row were made with a 10-inch radius, ¼th-inch post front sight. These were Patridge pistol sights on a new H.&R. pistol.

2nd row: Two triangles only (no 6-dot group) made with a sporting rifle having a 28-inch radius; ½th inch bright gold bead and a .15-inch hunting aperture.

3rd row: Made with a 1½X hunting scope and a flat-top post which covered 10 inches at 100 yards.

4th row: Made with a match rifle having a 34-inch radius; an .06-inch post front sight and an .05-inch target aperture.

5th row: Made with the same rifle, but a .10-inch front aperture.

6th row: Made with a 2¾X scope and a ¾-inch flat-top post.

7th row: Made with an 8X target scope and a fine cross hair (⅛th-inch coverage) which had a ¾-inch dot at the intersection.

With all sixteen of the cross-hair scopes the largest individual triangle was .380 inch, made with a 4X hunting scope. By this rating the 8X Junior Targetspot came first, its largest triangle being only .110 inch. The B.&M. 7X was next with .120 inch. It was interesting to note that one of the 4X hunting scopes was near the top of the list with a maximum triangle of .170 inch, while some of the better target glasses were lower in rank, having individual triangles as large as .230 and .260 inch. In this standing, from .110 inch to .380 inch, the order ran: 8X, 7X, 4X, 8X, 10X, 4X, 6X, 3X, 4X, 15X, 4X, 3X, 3X, 4X, 5X and 4X.

By average triangles the post sights ranked (from .238 inch to .448 inch) as follows: 4X, 2¾X, 2½X, 2¾X, 2¼X, 2½X and 1½X. With the metallic sights, an .06-inch post averaged within this group with .398 inch, and a bright hunting bead ranked just outside with an average of .670. The latter made the largest individual triangle, which measured .860 inch. The 4X Mossberg post was at the top of the list with a maximum triangle of .350 inch. By comparing the largest triangles, the inverse rank was: 4X, 2¾X, 2¾X, 2½X, 2¼X, 2½X and 1½X.

With seventeen different sights the two shooters had practically equal results. No conclusion could be drawn from this, however, because this list includes all targets, both post and cross-hair scopes, and the following different magnifications: 2½X, 2¾X, 4X, 8X, 3X, 5X, 1½X, 7X, 10X and 15X.

## ARMS AND AMMUNITION DEVELOPMENTS

(Continued from page 29)

The Winchester 28 gauge is a splendid little repeater, more effective than the 410 gauge, and meets a real need. Recently I purchased one of the arms.

**Marlin Developments.** Marlin Firearms Company made several improvements in their M/90 over/under shotgun in 1937 and added the 16 and 20 gauges to the line. A number of important features were incorporated in the gun including a removable automatic safety, elimination of the top lever screw, a reshaped receiver and breech, shorter tang straps, and a more shapely trigger guard.

## AMMUNITION CHANGES

Perhaps the most important ammunition changes pertained to the use of the Peters belted, expanding, non-disintegrating game bullet in a larger number of calibers and to the introduction of the Winchester 100-grain vermin bullet in the .270 caliber. This 100 grain bullet is given a muzzle velocity of 3,540 f.s. and it completes the cycle of the .270 Winchester as it is now loaded with bullets of 100-, 130-, and 150-grain weights, making the caliber highly satisfactory for use on everything from chucks to elk.

Remington and Peters added rifled shotgun slugs to their extensive lines, and these slugs are much more accurate and effective than the round balls formerly used.

## SHOOTING ACCESSORIES

Shooting accessories introduced during the year cover a wide range of subjects. Lyman brought out a better grade target telescope sight called the Lyman Super-Targetspot Scope with 34-millimeter (1.34 inches) objective, polaroid tested, Bausch & Lomb lens in 10, 12, and 15 powers. Special features include



new front and rear mounts with three point, 1/4-inch clicks, one piece frame clamp screw top rib, and redesigned focusing scale. Illumination and resolving power of the Super-Targetspot are quite superior to the older sight.

Owners of Lyman Targetspot scopes can convert their instruments into modified Super-Targetspots at reasonable cost. The optical features alone cost \$12.00 plus the old lens. If the new three point suspension mount with new blocks and improved locking device is ordered, the cost is \$12.50, or if both are desired, the cost is \$24.50.

Super-Targetspot is a little longer than the old instrument but is about the same weight, as a new, light-weight alloy is used for the front lens extension.

During the year Lyman also redesigned the mount for the No. 422 Expert Hunting Scope, which permits it to be mounted in a much lower position. Lyman also lengthened the hood of the 17A front globe sight. A new quick-detachable version of this sight known as the No. 77 to fit the new Winchester M/52 and Remington M/37 was brought out. Redfield also brought out a better aperture front sight with detachable inserts.

Mossberg announced two low priced scope sights of unusual design: one with both post and cross-hair reticules, the other a scope of multiple power, ranging from 3-power to 6-power. This latter instrument is a surprisingly good value for such a low price. Undoubtedly, this fine little scope will be well received by those who think they need a multiple power instrument. It appears to be substantially made, is nicely finished, and presents a very good appearance. Optics are quite superior to those found on other Mossberg scopes and are entirely satisfactory for a popular-priced instrument.

Winchester placed on the market a line of low-priced scopes, greatly resembling the Marlin, and adapted two of their low-priced .22-caliber rifles to the scopes.

Marlin announced a new 4X scope which they call their No. 2.

Weaver improved his 329 scope substantially and also announced his 330 and 440 series of improved scopes in 3X and 4X with internal adjustments for both elevation and windage. These scopes have good optics and the mechanics are also excellent. With a better mount, Weaver would go places with these fine, medium-priced instruments. Redfield have already developed a low-priced mount for Weaver scopes.

M. L. Stith, San Antonio, Texas, designer and manufacturer of the well-known Stith hunting scope mount with micrometer adjustments for windage and elevation, and designed especially for rough use, improved his mount during the year and increased his output several times over. Stith mounts feature a front lens protector not found on any other mount or scope, a very valuable adjunct for the man who carries his scope-sighted rifle in a saddle scabbard or otherwise subjects it to very rough treatment.

Griffin & Howe, Inc., brought out a new low-type side mount of the same design as the old one, and a special mount for the new featherweight Zeiss and Hensoldt scopes. Griffin & Howe also perfected a new mount for a high quality hunting scope to be announced by Lyman early in 1938. It is said that the prospective Lyman scope will equal the finest German scopes optically and surpass them mechanically.

National Target and Supply, Griffin & Howe, Pachmayr, Tilden, and possibly others have designed special safeties to replace the factory safety of the Winchester M/70 bolt-action rifle. I have examined the Pachmayr and Tilden safeties and I am convinced they are both meritorious. Since I have not seen the other safeties, no opinion is expressed.

R. F. Sedgley, Inc., did a nice business in 1937 with his patented safety firing pin and also his speed action for the U. S. Model 1903 Springfield rifle. This unique improvement prevents the cocking piece from leaving the bolt in case of a broken cocking piece rod or a broken firing piece, which occasionally

result from a ruptured cartridge case. A simple alteration costing only \$1.50 might save an eye or even more serious injury to the shooter.

Sedgley has also developed a successful method for speeding up the ignition of the Springfield and shortening the camming time. Fast ignition is essential to fine accuracy and the shortened cam permits the bolt to be opened with greater ease and shortens the firing pin throw. This alteration costs \$5.00.

Marble Arms and Manufacturing Company took over the manufacture of the popular Goss target receiver extension sight and henceforth the sight will be called the Marble-Goss. Recently Lyman developed an extension rear aperture target sight as this type sight is now much in vogue among the small bore target clan.

## A REVIEW OF RECENT TOURNAMENTS

*(Continued from page 32)*

up from Georgia—Bill is still trying to find out where the nine came from.

On the previous Sunday, February 13th, the two teams from the Roslyn Rifle Club sewed up first and second in the Two-Man Team Match with totals of 399 apiece. Walter Shanessy, winner of the individual in 1936 and, according to Long Island standards only a Class "B" shooter, teamed with Harold Powell, who says the reason he shoots so well at long range is because he is far sighted, outranked four other 399's for first place. The runners up were the 1936 winners—L. N. MacLeod and S. J. Vitrano. Third place went to Therkild Samsoe and Bill Schweitzer. The fourth 399 was shot by Major John Hession and Jim Lacy. Thirty-nine teams were ranked within ten points of the winners.

The Four-Man Team Match, fired on the same day, was also conspicuous, like the individual, for a lack of those three- and four-way ties which have so marked it in previous years. The Quinipiac Rifle Club of New Haven, made up of Jack and Jim Lacy, Eddie Doyle and Dave Carlson, 1936 winners, showed its heels to 16 other outfits to win and tie the 1937 record of 798, established by the Swiss Rifle Association of N. J. One point behind the winners was the Outer's Club of White Plains, N. Y., while third place was held down by the Union City Rifle Club of New Jersey with 795.

Since this story seems to be chronologically reversed we come to the first day's shooting last. Of the 17 competitors in this Preliminary Match, 41 of them had perfect scores of 500 x 500. To outrank them took some mighty tall shooting and some mighty tall shooting was done by the pride of Helsinki, known more familiarly as Dave Carlson of New Haven. Dave dropped three points in the maximum string of 16 targets permitted each competitor, to finish with a score of 1597 x 1600. Close on his heels with twelve possibles each and equal scores of 1596 x 1600 came the Texas Maverick Thurman Randle, Jim Lacy, and Bill Schweitzer, who claims the Jersey shore is for shooting, not swimming. Ransie Triggs and his Camel ad profile landed in fifth place, just missing a four-way tie for sixth (composed of Elsie Hellwig, Russ Lambert, Bob Gadd and M. A. Cooper). All of these had eleven possibles each.

The 10X possible prizes took a little beating on this day with R. Bergen, J. Kolbert and A. Crowley each collecting \$5.00.

As usual, Harry Pope, the president of the Metropolitan Rifle League, presided in full regalia, trick vest and all. Major Wm. E. Trull and George Bergmen, looking quite resplendent with their very official badges, scored an occasional wide nine or even, horror of horrors, an eight. Walter Kelsey and Sam Tekulsky demonstrated the intricacies of running targets back and forth from the pit to young Cooper. But has anyone realized that it's always Ed Smelter who collects the money?—TOM LEWIS.



## SINGLE-SHOT RIFLES

(Continued from page 7)

slipped from my thumb, and fired the shell. The half-cock feature of the later model is not entirely safe: part of the time the sear catches the hammer at the full-cock notch.

The Winchester Single Shot was probably made in more different weights and calibers than any other rifle. The calibers varied from the .22 short to the heavy Sharps cartridges and the .405 Winchester. In weights they ran from the .44-40 saddle gun with a light round 15-inch barrel, to a heavy rest rifle with a 36-inch No. 5 barrel weighing around 18 pounds. They were also made in all styles from this plain saddle gun to the highly ornamented Schuetzen rifles.

For some reason I have had a new Winchester Single Shot occasionally refuse to retract the firing pin until after a lot of jarring and shaking, and tapping of the firing pin with the hammer. Then, again, primer particles collect in the firing-pin hole until they wedge the pin, and the blows of the hammer eventually bulge the bushing around the firing-pin hole so the bushing protrudes and the bulge cuts creases in the shell heads.

But the action is strong. (Did you ever see one of the heavy actions blown up?) Maybe the following incident will show the abuse these rifles received, and stood. Many years ago an early settler living where the lumber town of Elk River now stands, had a .30-40 Winchester Single Shot rifle. He found .30-40 shells rather expensive for general shooting, so decided to reload. He asked a friend who was going to town to get him a can of smokeless powder, some bullets, and primers. The friend returned one evening with the components, and the settler loaded only one shell for a tryout. He stood in the cabin door, aimed at a 4-foot tree, and pressed the trigger. There was a tremendous crash, the rifle kicked out of his grasp, slid across the cabin floor, and stopped against the wall under the bunk.

"My!" said the friend, "I never heard that rifle make such a noise before."

"No," replied the settler, rubbing his shoulder, "it never kicked like that before, either. No more reloads for me."

There was a hole through the 4-foot tree, too, from the full-jacketed bullet. The early reloaders were absolutely reckless with the kind and quantity (usually a shell-full) of smokeless powder they used.

Probably the reason that single-shot rifles have lost out in popularity is because no new improved actions—adapted to modern loads and rimless shells—have been brought out in nearly sixty years. The greatest advantage a single-shot rifle had over the early repeaters was that the single-shot's bore could be examined and cleaned from the breech. As the bore of a bolt-action repeater can also be examined from the rear, the single-shot rifle has lost this advantage. The Sharps action was invented before the Civil War, the Ballard and the rolling-block (Ryder) came out in the '60's, the Remington-Hepburn and the Winchester were patented in 1879, and the Stevens No. 44½ about 1904. None of these was designed for high-intensity loads or rimless shells. The actions used for rimmed smokeless cartridges are simply the old models made of better materials and with smaller firing pins than those first designed for black-powder loads.

To be successful—strong, easy-loading, and safe for modern loads, a new type of single-shot action would have to be designed. A single-shot action needs a breech-block that will seat the shell as does a rolling-block, without finger help, and a breech that is closed and safe to the rear like that of a Sharps Borchardt. The extractor should move back in a straight line until the shell is well out, when it should release and go forward into place. To get such results it would be necessary to have an action with really two breech-blocks—the forward one a jam or rolling block which would obviate the necessity of a firing-pin-retractor mechanism and would push home a cartridge just

dropped into the chamber; the rear block being a vertical-sliding, locking block. There should be a choice of full cock or safety notch, and a detachable stud for the hammer so that the action could be used hammerless or be cocked by hand, as desired. There should be no sear between hammer and trigger, unless a set-trigger lock were used.

However, the new generation of shooters has been weaned away from the use of heavy single-shot rifles, until no new single-shot actions will probably ever be brought out; and the older riflemen that grew up with single-shot rifles, and prefer them, will just have to be content with the old ones available.

Some of the foregoing remarks may sound like a lot of knocks, but they are based upon forty years' experience with single-shot rifles. Possibly the malfunctions are remembered better than the thousands of useful shots in between; however, if there is anything wrong with a rifle it usually slows up at an awkward or embarrassing time.

A single-shot rifle may not have the rapidity of fire that a repeating arm has, but with the ordinary shooter this is not a hindrance, and in fact is a help, for with the average shooter, the first shot—well aimed—kills more game than all the following rapid-fire shots. What I heard an old Indian say when I was yet a boy, still holds true: "One shot, deer. Two shots, maybe deer. Three, four shots, nothing!"

The early .25-20 single-shot shells as made by Winchester used No. 2½ primers instead of No. 1 as now made.

## METALLURGY OF BULLET ALLOYS

(Continued from page 28)

should be noted. If it is not 620° F or 326° C make an arbitrary correction in your thermometer reading to correspond.

Now for the alloy. See that the metal is melted and raised above the temperature of melted lead. Remove from heat and put in the thermometer. Watch the temperature, and as the hot metal reaches the point where the excess component starts to crystallize out there will be the same slight kick in the thermometer reading as at point "B" in the diagram. Note the temperature and let the alloy cool further. As the eutectic point is reached the temperature decrease will stop and may even show a definite rise for a few moments as the freezing metal releases heat (point "C" in diagram).

This temperature for the lead-antimony alloy should be 475° F or 247° C. Check any difference in your thermometer at this point also and apply the average of the two corrections to the temperature reading at the first hump (point "B"). This will give the percentage of antimony in the metal according to the following table:

Antimony %	Melting point	Antimony %	Melting point
0.0	620° F	7.0	534° F
1.0	607°	8.0	524°
2.0	596°	9.0	513°
3.0	583°	10.0	502°
4.0	571°	11.0	490°
5.0	559°	12.0	480°
6.0	547°	13.0	475°

Thermometers for this purpose can be had from chemical supply houses for about \$4.00.

The usually available junk storage-battery metal is mostly car batteries and farm lighting batteries. The general average composition is as follows: Plate grids, antimony 12%, plate group connectors and posts 6%, and cell connecting bars 8%.

No attempt has been made to show the actions of ternary alloys of lead, antimony, and tin as their internal reactions are entirely too complicated to illustrate in a short paper.



## AUTOMATIC FIREARMS

(Continued from page 26)

Hiram Maxim had developed his short-recoil gun. Briefly, Browning bored a small hole in the barrel about a foot from the muzzle. He fitted this hole with a piston on the end of a swinging lever. When the gun was fired, the bullet passed this hole, and the gas, under high pressure, struck the piston and knocked it downward with great force. The piston caused the lever to which it was attached to swing downward and to the rear, operating a connecting rod which unlocked and retracted the breech block.

Shortly after Browning's invention, an Austrian—Baron Von Odkolek by name—produced a machine gun having a tube or cylinder, and piston, underneath the barrel. As in Browning's gun, the gas was allowed to act upon the piston through a hole in the barrel. The piston moved straight to the rear, and unlocked and retracted the breech block by means of a connecting rod. Later on this mechanism was developed into the well-known Hotchkiss machine gun.

The Hotchkiss or Odkolek weapon is quite representative of the general scheme used to harness the powder gasses in a gun by means of a gas piston. The reader may be familiar with the Browning Machine Rifle, caliber .30, Model of 1917, otherwise known as the "light Browning." This weapon operates by means of gas taken from the barrel into a cylinder, where the gas acts upon a piston, which, through a connecting rod, unlocks and retracts the breech block.

The Lewis machine gun, used by the British during the World War, is gas-operated, air cooled, and drum-fed. This weapon has been used quite extensively on aircraft. Recently the British adopted the Bren light machine gun, also gas-operated, which weighs about twenty pounds (slightly less than the Lewis).

In their valiant attempt to design a semi-automatic military shoulder rifle to replace the Springfield, our Army Ordnance Department finally developed the gas-actuated Garand. This rifle is without question the simplest, neatest, and lightest gas-actuated weapon ever made.

The old Standard gas-actuated sporting rifle was sold to the public in limited numbers some years before the War.

Generally speaking, there are two methods of using gas to operate a gun. When the gas is allowed to hit the piston and literally *knock* it back, we speak of an "impinging-gas" arm. Where gas is admitted to a cylinder and allowed to *expand* against the piston, we speak of it as an "expanding-gas" arm.

An unduly complicated mechanism is required to allow powder gas to *expand* within a cylinder. You must admit some gas through a hole in the barrel, and then close the hole quickly. But expanding gas gives an extremely smooth action. On the other hand, impinging gas is not so complicated to harness up. That is the system used on the B. A. R. and the Garand. But impinging gas gives a rough, harsh action. It tends to bang the parts. You need a gas cylinder in either case, but the expanding-gas type in a rifle is apt to be more delicate and must not leak.

The worst fault with gas-actuation is the powder fouling in the cylinder and on the piston. On the Browning Machine Rifle there is a special gadget with various-sized holes in it, so that when the gas port or hole in the barrel gets plugged, you can enlarge the hole. Gas pistons on the light Brownings are often prone to get struck. Sometimes you can hardly drive the piston out of the cylinder in dismounting the gun. This is true of all gas guns. They must be cleaned every few hundred rounds if fired intermittently.

Moreover, the operating parts of a gas-operated weapon are very expensive, quite difficult to manufacture, and easily damaged in service. A great number of those who use automatic weapons professionally are opposed to gas-operated machine guns, and more especially gas-operated rifles.

Although I have a personal bias, I cannot see much merit in

a gas-actuated *rifle*, no matter how good it is. However, it is much easier to criticize another man's gun than to build one yourself!

## LOOKING AHEAD

(Continued from page 10)

—evidence that it pays to give some attention to the juniors.

Instructor Tuttle has prepared two visible charts which have proven particularly helpful in this work. The first and best of these is a qualification chart which shows at a glance the standing of every member in the club. This has the qualifications at the top of the sheet and the members' names at the left. Half-inch gummed stars are pasted on the chart immediately upon the completion of any stage in the course. This not only encourages competition among the members, but is helpful to the coaches as well.

The second chart is simply a wall blackboard ruled expressly for the junior work, which tells—without question or argument—the order, name, coach, rating, position, and type of target for each member firing. In this connection the instructor offers each evening a candy bar to the high individual under fifteen years of age. The highest-scoring target fired each week is tacked on the bulletin board.

This club is now planning a two-man-team Father-and-Son shoot. This event has aroused considerable interest in the whole city, and resulted in no little "kidding" regarding the ability of the several parents.

Mr. Tuttle and his assistants enjoy their work with these young riflemen and senior club members of the future, and what has been accomplished here can be duplicated by every other organized group of senior riflemen. But in each case it requires some live wire to start this sort of thing in a club, and an interested live-wire group to carry the work on. It is probably safe to say that there is hardly a real rifle club in the country which does not number among its members one or more individuals who "have what it takes" to put this sort of thing across in their club—if they but realized its far-reaching importance to the club itself, and to the community as a whole. So we ask of each of you that you give this matter serious consideration, to the end that your club may not gradually dry up and eventually disappear entirely; that the youngsters in your community may have available to them a manly and uplifting sport, at the time in life when they most need such; and that America may maintain its claim to being a Nation of Riflemen.

## NOW THAT YOU HAVE A CAMERA—

(Continued from page 20)

gray fur. Or maybe the hunter can be carrying him on his shoulders; this will put the buck against the sky or a clump of dark hemlocks. Having placed your group, quickly step off four paces from where they stand (twelve feet will usually give a generous full length figure in the picture). Set focus and check the composition in the finder. Now take your meter reading—let us say f:5.6 at  $\frac{1}{250}$ th sec. Set the diaphragm and the shutter speed; and again, I say, don't forget to wind the shutter! Careful! You have a difficult shot to make. The paced-off focus must be exact because the lens is open to f:5.6 which allows but little depth of focus. Your shutter speed is  $\frac{1}{250}$ th sec.—quite slow and difficult to hold steady in the offhand shooting position. Your feet should be easy apart, your breath held, and the camera against your forehead and with one elbow leaning against the body if possible. Then the rapid, but steady, squeeze . . . and it's in the bag! Oh!—and don't forget to wind off the film to the next number!



## Guns vs. Bandits

**H**UNTINGTON Park's (Calif.) first soda-pop-bottle bandit met death in a fusillade from the revolver of his intended victim. Shortly after 9 p.m., M. E. Bartholomew, 55-year-old grocer, closed his store and started home. As he neared his home a man stepped into his path. "This is a holdup, come across," Bartholomew quoted the bandit as saying.

When he hesitated about giving up the store's receipts the man hit the grocer and felled him with a pop bottle. When the grocer hit the ground he reached for a revolver he carried and fired six times at the man standing over him. All shots took effect, killing the bandit instantly.

Two robbers held at the Town Hall station in Chicago were debating today whether a woman threatened isn't even more furious than a woman scorned. Their capture dated from the moment a police squad was notified to go to Belmont and Racine avenues and look for a woman carrying a revolver.

At the intersection the squad found Mrs. Lillian Tulley in full pursuit after two men. Mrs. Tulley was brandishing a gun and covering ground. So were the men. One of them even outran the squad, but the police picked up the other and took him to the station. There he identified himself as Louis McNevin who said he was paroled from the Stillwater (Minn.) prison after serving ten years for robbery.

Late in the evening the two bandits had entered the drug store operated by Mrs. Tulley and threatened her with an automatic pistol, seized the contents of the cash box and then fled.

Mrs. Tulley ordered one of her clerks to notify the police, then seized a revolver from a handy drawer and set out after the men.

Confronted by two men while a third remained in the car, Arthur Walker, attendant at a filling station in Clifton Heights, Pa., was ordered to "Stick 'em up and give us the cash." Both pointed pistols at him.

Walker laughed: "You're too late, buddy, my brother just took the money down to the house. Look! I'll show you."

He opened the cash drawer, shoved \$12.00 aside and grabbed an automatic. The bandit near the door fled while Walker cut loose at the other. One bullet plowed into his head as the second grazed his hand. The third thudded into his chest, and he fell head foremost through the

door. His companions dragged him to the car and sped away.

The believed victim of Walker's daring, died of gunshot wounds later in the Fitzgerald-Mercy Hospital. With his death, police were questioning three other men, one of whom was identified by the attendant who seized a revolver instead of the cash in the register.

Sharpshooting Postmistress Kamp, of Mokomis, Ala., small wayside station southwest of Atmore, settled her two-year-old account with burglars when she riddled a bandit with her late husband's .45 revolver.

Two years ago her husband died of heart failure when he grabbed his gun and attempted to rout a burglar who had broken into the post office, located in the Kamp's general store.

About 3:30 a. m. Mrs. Kamp heard an intruder. She grabbed her gun and investigated. Before the intruder could escape the quick shooting postmistress had drilled him through the thigh. Brought to Brewton, the would-be burglar admitted he was wanted as a fugitive Atlanta jail breaker. The wounded prisoner admitted he and his wife had been arrested in Atlanta but that he recently escaped jail there.

Courage which sent him into a blazing building last December to rescue a cripple and receive the Meritorious Service Medal again sent Eugene Ferdinand Wemple, of Washington, D. C., on an heroic mission when he brought about the capture of a negro gunman.

For the second time within a little more than a week Wemple found himself staring into the muzzle of a revolver from behind the counter of a Sanitary Grocery Store of which he is manager. When the first holdup occurred Wemple missed his man. But this time with twelve customers and John Ownes, a clerk, cowering before the menacing revolver, Wemple waited for the intruder to scoop up the contents of the cash register and reach the door. Then he darted forward. Leaping on the running board of a cab, Wemple chased the robber until he finally cornered him when the gunman left the cab and dashed into a house. There, Wemple kept him imprisoned until police arrived. (*Washington Herald*.)

A youthful grocery store bandit was wounded one night and escaped only with the aid of his companion when the pair

were met by a burst of gunfire from the revolver of an elderly Seattle grocer.

The grocer, Leander Benner, sixty-three, raised his revolver and fired as one of the gunmen covered him with a pistol.

One of the bandits entered Benner's store before 8 o'clock and loitered by the candy counter, buying a dime's worth of candy, the grocer said. A few moments later, the second bandit, brandishing a pistol, walked through the door, commanding: "Stick 'em up. This is a hold-up."

The grocer did not look up. Instead he sidled toward the cash register where he kept his own revolver, he said.

"I grabbed it, raised it and fired. The fellow with the gun sort of staggered. I hit him in the chest, I think. He turned and the other fellow ran to him. Then they ran out of the store together," Benner related.

"I had that gun put there three years ago after another holdup. I said then nobody would ever get away with it again. If I hadn't had the gun, I don't think I'd have been much of a match for them." (*Seattle (Wash.) Post-Intelligencer*.)

### UNIVERSITY OF CHICAGO INDOOR DEWAR PROGRAM TO HAVE FULL REGISTRATION

**A**T the time that the forms closed for the March RIFLEMAN, it was anticipated that the Executive Committee would take steps to change the method of handling registered shoot scores so as to permit the annual publication of the actual averages of all competitors in registered tournaments, both indoor and outdoor, with the idea in mind that the publication of such a list would enable all tournaments to conduct classified matches if they so desired. Because of the considerable number of other subjects of importance which came before the Committee, it was not possible to go into the details involved in such a change of plans, so that the 1937 system of ranking competitors remains in effect. Inasmuch as this system is based on the number of competitors defeated, rather than on the average score, a man's standing is not affected by varying conditions of wind and weather.

For this reason, scores made at the University of Chicago Indoor Shoot will have the same status as scores made at any other registered tournament insofar as the ranking of small bore shooters for 1938 is concerned.

A notice which appeared on page 39 of the March issue of THE AMERICAN RIFLEMAN, indicating that scores made in indoor Dewar tournaments would be registered in a separate list, was therefore in error.



# WIN MAJOR CHAMPIONSHIPS in CONNEC in METRO, 4-MAN TEAM and 11 of 1510

## WINCH STAYNLESS al



Carl G. Johnson



Richmond Hill Rifle Club Team. Left to right, Charles Jordan, George Benham, Al. Crowley, H. J. Steinberger, Roy Powelson.



Walter Moore



Brooklyn Tech No. 1 Team. Left to right, Stanley Adelman, Edward Meyer, Hyman Perlman, Roy Bryant, Norman Sawyer.

Connecticut Individual and Team State Championships all Won Winchester High-Over-All Individual Championship Staynless. High-Over-All Junior Individual Championship both with Model 52. . . . Metropolitan won with EZXS Caliber 38

### TENTH ANNUAL CONNECTICUT GALLERY CHAMPIONSHIPS

NEW HAVEN, MARCH 4, 5, 6

BY far the greatest indoor small bore rifle tournament on record, with 1,140 entries, these matches were held on the Winchester ranges, which have 30 firing points. And again, as last year, the major honors were won by shooters using Winchester Ammunition and Model 52 Rifles. Another smashing demonstration of the dependable superiority of Winchester equipment. A considerable majority of the contestants used Winchester Ammunition, a notably large number of them shooting the new Leader Staynless and making many fine scores with them. As usual, the predominant choice in rifles was Winchester Model 52.

#### INDIVIDUAL MEET AND STATE CHAMPIONSHIP

- 4 Positions—50 Feet—Metallic Sights
1. Carl G. Johnson 192 x 200 M52 H.B. Staynless EZXS Stamford, Conn.
  2. H. J. Steinberger 191 M52 Richmond Hill, N. Y.
  3. Edward Gienza 190 M52 Middle Haddam, Conn.

#### SENIOR TEAM CHAMPIONSHIP

- 4 Positions—50 Feet—Metallic Sights
1. Richmond Hill Rifle Club, St. Albans, N. Y.—929 x 1000
 

Al Crowley	190 x 200	M52	Staynless
H. J. Steinberger	191	M52	
Chas. Jordan	186	M52	
Geo. Benham	182	M52	
Roy Powelson	180	M52	
  2. Quinnipiac R. & R. Club Team No. 1 927 x 1000 New Haven, Conn.—State Championship
 

D. Carlson	189 x 200	M52	Leader Staynless
W. Breuler	188	M52	Leader Staynless
Jack Lacy	186	M52	Leader Staynless
Jim Lacy	183	M52	Leader Staynless
E. Doyle	181	M52	Leader Staynless
  3. Enfield, Conn., Team No. 1 923 x 1000 All Staynless
  5. Capital City, Conn., Team No. 2 913 x 1000 All Staynless
  6. Enfield, Conn., Team No. 2 911 x 1000 All Staynless
- Six of the seven highest Connecticut teams used Model 52 and Winchester Staynless.

#### WOMEN'S MEET INDIVIDUAL

- 4 Positions—Metallic Sights
1. Katherine Chodas 100 M52 E. Hartford, Conn.

#### WOMEN'S STATE TEAM

- 4 Positions—Metallic Sights
1. Middlefield, Conn. 1 869 x 1000 (Match 2 used Winchester)

#### JUNIOR INDIVIDUAL

- 10 Shots Staynless—50 Feet
1. Walter Moore 100 M52 Brooklyn, N. Y.
  2. Roy Bryant M52 Brooklyn, N. Y.
  3. Edward Kirkby Pequabuck, Conn.

#### JUNIOR STATE TEAM

- 10 Shots Staynless—50 Feet
1. B'klyn Tech No. 1 93 M52 Brooklyn, N. Y.
  2. B'klyn Tech No. 2 All M52 Brooklyn, N. Y.
  3. Poly Prep High School All M52 Brooklyn, N. Y.
  6. W. Harding High School All M52 Bridgeport, Conn.

#### METROPOLITAN CHAMPIONSHIP

ON the heels of the Metropolitan Individual Match, the Metropolitan team and match shooters using Winchester equipment through with high play. First in the tough Metropolitan Match members using Winchester Model 52, First in the Metropolitan Match using Model 52, and the Individual Match with the Third and Fifth of the

WINCHESTER REPEATING ARMS CO.



# CONNECTICUT'S RECORD INDOOR MEET... HIGHEST INDIVIDUAL PLACES...with WINCHESTER EZXS HS-38

Individual, 11 used EZXS and 11 Model 52—4 with special barrel.  
**WINCHESTER STAYNLESS AND MODEL 52.**  
 Championship Staynless EZXS and Model 52. State  
 High All Junior Team Championship both with  
 individual championship and State Women's Team Cham-  
 ... Politan Team and Individual Honors  
 XS Co-38 and Model 52.

**WINCHESTER STAYNLESS AND MODEL 52.**  
 Positions—All Sights  
 ne Chodas M52 Staynless  
 (ford, Conn.)

**WINCHESTER STAYNLESS AND MODEL 52.**  
 Positions—All Sights  
 field, Conn. I  
 1000 (Mas)  
 Winchester

**WINCHESTER STAYNLESS AND MODEL 52.**  
 Positions—All Sights  
 field, Conn. I  
 1000 (Mas)  
 Winchester

**WINCHESTER STAYNLESS AND MODEL 52.**  
 Positions—All Sights  
 field, Conn. I  
 1000 (Mas)  
 Winchester

**WINCHESTER STAYNLESS AND MODEL 52.**  
 Positions—All Sights  
 field, Conn. I  
 1000 (Mas)  
 Winchester

**WINCHESTER STAYNLESS AND MODEL 52.**  
 Positions—All Sights  
 field, Conn. I  
 1000 (Mas)  
 Winchester

**WINCHESTER STAYNLESS AND MODEL 52.**  
 Positions—All Sights  
 field, Conn. I  
 1000 (Mas)  
 Winchester

shooters in the Individual, 11 used EZXS and 11 Model 52—4 with special barrel.

**INDIVIDUAL CHAMPIONSHIP**  
 50 Shots—100 Yards—Any Sights  
 3. S. J. Vitrano 499 x 500—34Xs M52 EZXS  
 4. T. Fakelman 499 x 500—32Xs M52  
 5. Sam Moore 499 x 500—30Xs M52 EZXS

**TWO-MAN TEAM CHAMPIONSHIP**  
 20 Shots Per Man—100 Yards—Any Sights  
 1. Walter Shanessy 200 x 200 M52  
 H. Powell 199 M52  
 399—30Xs  
 2. S. J. Vitrano 200 x 200 M52  
 L. N. MacLeod 199 M52  
 399—26Xs

Teams winning Third and Fifth also used Model 52.

**FOUR-MAN TEAM CHAMPIONSHIP**  
 20 Shots Per Man—100 Yards—Any Sights  
 1. Quinnipiac Rifle & Revolver Club—798 x 800  
 Jack Lacy 200 x 200 M52 EZXS HS-38  
 Jim Lacy 200 M52 EZXS HS-38  
 Dave Carlson 200 M52 EZXS HS-38  
 E. J. Doyle 198 M52 EZXS HS-38

Tying the match record, which was also set with Winchester Model 52 and EZXS.

2. Outers' Club—797 x 800  
 R. E. Brown 200 x 200 M52 EZXS  
 R. Bergen 200 M52  
 A. E. Sharp 199 M52  
 G. Whitney 198 M52  
 3. Union City Rifle Club—795 x 800  
 J. C. Lippencott, Jr. 200 x 200  
 T. Fakelman 199 M52 EZXS  
 W. P. Schweitzer 198 M52  
 B. P. Emmrich 198 M52

The teams winning Fourth and Fifth places all shot Model 52, two on each team using Winchester EZXS.

**WHEREVER** competition is piled up hot and heavy, there you find plenty of hard-to-beat shooters in the thick of it—and going places—with Winchester equipment. To confidently share in this same fine spirit to win ... to pick up the few more points you want ... shoot Winchester Ammunition in a Winchester New Model 52 Target Rifle. Try out the New Staynless EZXS and Leader Staynless in your rifle. Your dealer will gladly supply you.



Quinnipiac Rifle & Revolver Club Team No. 1. Above: Wm. Breuler, E. J. Doyle, Dave Carlson; below, Jack Lacy, James Lacy.

John Kolbus, and a composite of his best 4 groups—20 consecutive shots at 100 yards, prone—picked as best 200 x 200 target shot in the Metropolitan Preliminary. He used a Winchester New Model 52 heavy barrel rifle and EZXS HS-38.



Walter Shanessy



H. Powell



S. J. Vitrano



L. N. MacLeod





## CHICAGO'S SPORT SHOW MATCHES

**T**HE annual shoulder-to-shoulder rifle and pistol matches, held in connection with Chicago's Annual Boat & Sports Show, were fired at Navy Pier from February 27 to March 6, inclusive. An exceptionally attractive program of individual and team competitions brought out a large entry list including many women shooters, tyro marksmen and junior entrants. In addition, a large number of show visitors competed for qualification badges.

The shooting program, sponsored by the *Chicago Daily News*, was conducted by officials of the Illinois State Rifle Association. The permanent range officer, Freeman Morgan, Jr., ran the line and kept relays moving on schedule while volunteers took entries, arranged squaddings and scores. The range was open daily from one o'clock until eleven.

"Hub" Erickson, Boat & Sports Show manager, provided ample room for spectators who thronged about the range at all hours. At times visitors were massed seven, eight and nine deep, back of the firing point during the evening hours. In eight days more than 200,000 sports lovers passed through the show's turnstiles. A large proportion of them stopped to witness the range activities.

"Salty" Bell, feature writer, who handled all publicity for the Boat & Sports Show, reported the day-by-day happenings and *News* readers were kept fully informed as to the progress of the matches and the details of each day's events.

The first competitive event was a slow fire pistol match won by F. R. Kent who turned in a 180. A. Kelchauer and W. C. Wennerberg were second and third. W. H. Parr captured first honors in a slow fire .22 caliber match which was also fired on Monday. L. E. Schmiedl, Bill Sasko and E. H. LaRue finished one, two, three in the first rifle event in which conditions were five shots each prone, sitting, kneeling and standing, any sights.

An iron sight standing re-entry match on Tuesday was won by Chester Rubin with a 92. John George scored a 91 for second and August Tange a 90 for third. Competition was no less close in a twenty-shot prone match for women fired the same day. Cora Converse, Miralotte Sauers and Ruth Peterson registered 199, 198 and 197, respectively. Two pistol events were scheduled on Wednesday, one a re-entry. In the slow, timed and rapid open event, Thomas Bailey, 275; F. M. Baldwin and A. Kelchauer, 271, were tops.

John George fired a 200 possible to win Thursday's prone and sitting rifle match and on Friday night twenty-three four-man pistol teams took over the range in what was the largest shoulder-to-shoulder match fired in the Chicago dis-

trict in several years. The number three team of the Federal Reserve Bank decisively defeated all comers. The new Panther Revolver Club and team number six of the Federal Reserve Bank were second and third, each squad scoring 979. The competitive program closed on Saturday night with the firing of the popular four-man rifle team match which was won by Lake View Rifle Club with a total of 729, closely paced by the Humboldt Park Rifle Club team which scored 726.—*Sherwin Murphy.*

## IMPORTANT—PLEASE NOTE

*Editor, AMERICAN RIFLEMAN*

DEAR SIR:

In Mr. Goode's article in the March RIFLEMAN, he, in discussing the uses of certain small-caliber rifles, mentions their adaptability to long-range shots at geese and turkeys. I feel that THE RIFLEMAN should correct one portion of this statement before some shooter gets into serious trouble with the Federal authorities. If you will obtain a copy of the regulations issued by the Department of Agriculture covering the taking of all migratory waterfowl, you will find that waterfowl may be taken *only* with the shotgun fired from the shoulder, and subject to certain other conditions. The use of the rifle in the taking of any waterfowl has been for some time illegal, and by all means should be discouraged. The shooting of geese by the means suggested would be illegal.

While I am on the subject of these small-caliber "varmint" rifles, I should like to say that conservation frowns upon, and rightly, I believe, the unnecessary shooting of so many forms of animal and bird life with guns of this type. There are plenty of crows and chucks without other life having to suffer so much. I have seen mention of herons and egrets (also on the Government's protected list) having been taken, while all hawks and eagles seem to be considered fair game. In areas where the eagle is uncommon it seems to me almost criminal for the rifleman to shoot one of these great birds, although there is every justification in the act in an area where the bird has an unfavorable position in the economic scheme. The same may be said to be true of a great majority of the hawks. The rifleman owes it to his reputation as a good sport to determine the true status of all non-game creatures in the scheme of things before he uses them for experimental purposes with his firearms. If some consideration is not given to this matter, rifleman may find themselves in a bad light with the large numbers of conservationists the country over.

JAMES TRENT, JR.

## D. C. M. NOTES FOR CLUBS

**W**HEN Government property, issued to civilian rifle clubs, becomes un-serviceable, shipping instructions should be requested from the Director of Civilian Marksmanship, for its return to designated arsenals for replacement. No property should be allowed to become completely worn out, so that no parts can be returned, unless the club wishes to pay full replacement value for such property.

Also, the caliber .30 and caliber .22 rifles issued by the Director of Civilian Marksmanship to civilian rifle clubs are not to be altered or modified. It has been found that some clubs go ahead and cut down the length of the stock, check the stock, or mar the stock by inserting plates or numbers. When such changes are made and later the rifles are returned to the arsenal for exchange, or as no longer needed by the club, full price for replacement of such stocks must be charged against the club. This applies also to all parts of the rifles altered or changed by club members.

## NEW .30 CALIBER RANGE AT WINTER HAVEN

**T**HE Winter Haven Rifle Club, Inc., of Winter Haven, Florida, has started construction of their new .30 caliber range. The club has bought a tract of land and the range will be ready for the State Shoot May 14th and 15th. Twelve targets will be installed with firing points at all standard ranges, including 1,000 yards. When finished it will be one of the finest ranges in the South.

## CARL FRANK IS FIFTY-THIRD ON SMALL BORE RANKING LIST

**T**HE need for correct listing of competitors' names and addresses by Registered Tournament Officials has just been brought home to us very strongly through an error in connection with last year's Small Bore Ranking List.

Mr. Carl Frank of Rochester, Minn., attended two Registered Tournaments during 1937, at one his name was listed as "Carl, Frank" and the other carried him as "Frank, Carl." The latter was correct and consequently his ranking card for this tournament was filed in the N. R. A. office under the proper alphabetical division. His card for the first tournament was filed under the name Carl. Neither card alone contained the required number of matches.

Mr. Frank faced 2,670 competitors in thirteen matches defeating 620 of them to finish the year with a ranking figure of .7677 which places him 53rd on the 1937 Ranking List.

THE AMERICAN RIFLEMAN



## Rapid Fire—

In talking with General Reckord at the St. Petersburg, Florida, rifle matches we learn that the much-discussed firearms legislation is to be aired over a nationwide radio hook-up, March 31. General Reckord takes up the cudgel for N. R. A.'s part of the controversy with Brian McMahon, Attorney General Cummings' assistant, going to bat for the Attorney General's proposals. Sorry this announcement couldn't have been made in the March RIFLEMAN, but it is only a recent development and just one of those breaks for our game. The General has plenty of thunder ready for the big chance to tell our story to a nation-wide audience.

A large number of Sportsmen's Shows have come up during the past two months in which we have been well represented. Baltimore's North American Outdoor Sports & Garden Show provided a large booth for an N. R. A. display of old and modern guns, which attracted a great deal of attention. The Hartford, Connecticut, show included space for the state association where the officials plugged for new N. R. A. memberships, as did also members of the Matamoras, Pa., rifle club at their local sportsmen's show. It might be well for local clubs to watch for these opportunities to create interest in target shooting, as the shows are always attended by a large number of firearms enthusiasts who would also welcome an acquaintance with the AMERICAN RIFLEMAN.

Jim Beloungey, chief engineer for that powerful Charlotte, N. C., radio station WBT, who paved the way for the first broadcast of a rifle match, the North Carolina State Small Bore Matches at Kannapolis last year, came through with another excellent spot for shooting talk Monday night, February 28, when the time opened up through Boake Carter's changing of sponsors was given N. R. A.'s Bill Shadel. We had an excellent chance to tell southern sportsmen of the part a straight shooting America was playing in the "Guns vs. Bandits" episode. Crutchfield, the sports announcer, acted as interlocutor on this occasion again as he did a year ago. Beloungey, by the way, is one of the most enthusiastic riflemen we've met, has never fired anything but the rifled tube, and can be found any week end (so his wife—who sets up a meal like you've read about in southern lore—says) at his cabin up in the North Carolina mountains. We're going to take up his offer to provide us plenty of shots at those Carolina deer, next fall, too—

that is, if we survive Camp Perry. And his partner, Jack Moffet, incidentally, has turned out some of the prettiest stocks we've seen. You Carolina boys should make his acquaintance.

It's good to see the British Rifleman's campaign for funds to send a team over here for a return Pershing Trophy match on the up and up. We notice the fund is becoming larger each month, which seems to indicate that we can soon play the part of host to the visiting British Riflemen.

O. B. Keeler, the dean of southern sports writers, the Boswell of Bobby Jones, the sage of Atlanta, and the most welcomed fellow in any circle, deserves the thanks of every rifle and pistol shooter for his invaluable help in securing publicity through the entire south as roving reporter on a two weeks' tour of the Florida matches with your correspondent. His contacts with nationally famous sports writers, dozens of them working or vacationing in that section during the spring training season of the big leagues, has promoted a wholesome regard for our type of competition. In many cases it has proved their first recognition of what was to many of them an otherwise unknown sport. He's not only one of the best known sports writers in the country, the final word in golf in particular, but is one of those real dyed-in-the-wool admirers of guns.

On our way south the stop in Atlanta gave us a chance to inveigle him into the tour of sports centers through the south. Starting with an interview over WSB in Atlanta, where he carries on a sports broadcast, a series of radio programs were arranged in which he provided the leading questions to RIFLEMAN readers' well-known doctrine of firearms safety, firearms competition, and the guns vs. bandits dope you have been reading for so long.

In Atlanta the interview followed closely on that city's recent headliner, where a boy who was "confident the gun was not loaded" shot his girl friend, after playfully pointing the gun at her and pulling the trigger just before going target-shooting, as he said. You will recognize, of course, that this was no regular in our ranks, because such things just don't happen.

With the final collegiate shoulder-to-shoulder competitions coming up this month we are reminded of a clipping taken from one of the Pittsburgh papers last year which gave the scholastic honor roll for the University of Pittsburgh. Leading the list with a comfortable margin of scholastic averages was the varsity rifle

team, which may or may not prove anything, but at least is good to look at and indicates that the collegiate riflemen are serious about their studies as well as their target shooting.

A number of new ranges in various locales deserve an honorable mention here. One of the finest gallery ranges we've seen is the one recently opened in the *Baltimore (Md.) Pikesville Armory*, the home range of the 110th Field Artillery Rifle & Pistol Club. Captain MacDonald, president of the club, tells us that each week an average of around two hundred shooters, aside from club members, take their practice on this range. This might indicate the popularity of target shooting in Baltimore or any other place when adequate facilities are available and properly publicized.

A new range at the *College of the City of New York*, built by WPA during the rehabilitation of the stadium, includes an eight target rifle range and a five target pistol range, classroom, toilet and shower accommodations covering a floor area of approximately 5,200 square feet. Electrically controlled target carriers, sound proof booths and a system of air conditioning are some of the features.

One of the most interesting range development projects comes from good old *New Orleans*. A. G. Quina tells of the reclamation of a piece of marshland on the shores of Lake Pontchartrain, just a mile and a half from the city limits and easily accessible to all. Perhaps in a later issue we can find space to tell this story. Quina, President of the Pelican Rifle Club can be reached at 6845 Colbert St., New Orleans, for information on the use of this new range.

Another attractive set up is that of the *Pima Pistol Club of Tucson, Arizona*. The enthusiasm of Secretary-Treasurer Sam Mansfield is instilled into us as he compares it with the old range on which they fired their matches a year ago "among a lot of giant cactus, chollas and rocks." Now the club members who are closely allied with the Tucson Rifle Club can boast of one of the finest ranges in the Southwest, located in the foothills within easy distance of the city. There are thirty disappearing target frames on the 25 yard line, and thirty targets at fifty yards.

The *Memphis (Tenn.) Rifle & Revolver Association* has opened a new range with facilities for 75 foot shooting. N. R. A. members in and around Memphis should get in touch with Edward Sheely, Jr., 1213 Forrest St., Memphis.

We have also received pictures from J. W. Woolrey, new American Legion director of marksmanship, of the new building and range of the Colorado State Penitentiary Guards Rifle Club at *Canon City, Colorado*. The club has 143 members.



## COMING EVENTS

### The Sea Girt Championships

**T**HE third in the new series of Sea Girt Championships will take place this year starting May 27 and ending on the afternoon of Decoration Day, May 30.

To those who have attended the previous tournaments, this announcement will undoubtedly be welcome news and to those who are still unacquainted with this famous old range the Sea Girt Tournament provides a timely opportunity to visit the birthplace of small bore competitions at its best.

The final program of events is not yet completed, but judging from past performances we may well be prepared for pleasant surprises. This tournament two years ago introduced innovations that are now becoming "standard practice" in all sections of the country. The new classification for restricted matches and the introduction of the international 100 yard target in big-time competition are notable Sea Girt innovations. This year the matches will have added appeal in that separate medals will be set aside for juniors who take part in the regular matches. The junior shooters will thus have the opportunity to shoot alongside of veteran shooters and have a chance to compare scores shot under identical conditions, yet they will be competing in a separate junior class.

This year the Sea Girt program will include a three position match which will probably consist of twenty shots each standing, kneeling and prone, metallic sights, on the 50 meter target. Perhaps Sea Girt will in this way furnish some incentive to prospective members of next year's U. S. rifle team.

One of the surprises of this year's tournament will be a disc-breaking team match, done in the manner of the famous Bisley match. It will undoubtedly prove the talk of the tournament and will provide an interesting spectacle for the visitors who will derive probably more excitement than the competitors themselves from this spectacular event. Ask one of the boys from Bisley if you require verification on this statement.

The chairman for this year's matches is the well known Ralph Coffey of the Perth Amboy Rifle Club and he will be ably assisted by a staff drawn from every corner of the state of New Jersey. The tournament is held under the auspices of the Association of New Jersey Rifle and Pistol Clubs and will, of course, be "registered" with the N. R. A.

This tournament will also provide a comprehensive pistol program in keeping with the matches held in previous years. Programs will be ready about the middle of April. If you do not receive a copy write to W. P. Schweitzer, 885 Westminster Ave., Hillside, N. J.

### CALIFORNIA

\*May 13-14-15: California State Small Bore Championships at Richmond, California. Sponsored by California Rifle and Pistol Association. For programs write L. A. Pope, 532 Oakford Drive, Los Angeles, Calif.

\*June 11-12: The Fifth Annual Western Small Bore Championship Rifle Match at Richmond, California. Sponsored by Richmond Rifle and Revolver Club, Inc., and the Richmond Elks Rifle Club. For programs write E. J. Martin, 325 12th Street, Richmond, California.

\*June 19: Southern California Pistol League Match at Los Angeles, Calif. Sponsored by Southern California Pistol League.

June 17-18-19: California State .30 Caliber Championships at San Luis Obispo, California. For programs write L. A. Pope, 532 Oakford Drive, Los Angeles, California.

\*July 29-30-31: California State Pistol Championship at Los Angeles, Calif. Sponsored by California Rifle and Pistol Association. For programs write L. A. Pope, 532 Oakford Drive, Los Angeles.

\*August 5-6-7: Southwest International Pistol Tournament at San Diego. Sponsored by San Diego Police Revolver Club. For programs write Rodney S. Pease, c/o Police Department, San Diego, California.

### COLORADO

\*May 15: Colorado Rifle Club Small Bore Tournament at Denver. Sponsored by Colorado Rifle Club. For programs write Edward W. Bres, 1408 Quebec Street, Denver, Colorado.

\*May 22: 5th Annual Greeley Dewar Matches at Greeley, Colorado. Sponsored by Greeley Rifle Club. For programs write Roy Grindlie, Strubel Apartment No. 36, Greeley, Colorado.

### DELAWARE

July 22-23-24: Delaware Tidewater Small Bore Championship Matches at Wilmington. Sponsored by Wilmington Marksman's Club. For programs write F. R. Lesney, 106 East 16th Street, Wilmington, Delaware.

September 30-October 1-2: Delaware Tidewater Pistol Matches at Wilmington. Sponsored by Wilmington Marksman's Club. For programs write F. R. Lesney, 106 East 16th Street, Wilmington, Delaware.

### FLORIDA

May 14-15: Annual Florida .30 Caliber Matches at Winter Haven, Florida. For programs write Harry E. Miller, Winter Haven, Florida.

### GEORGIA

\*May 28-29: North Georgia Small Bore Tournament at Atlanta. Sponsored by Atlanta Rifle Club. For programs write E. P. Menzen, 969 Cunningham Place, Atlanta, Georgia.

### ILLINOIS

\*April 1-2-3: University of Chicago Indoor Dewar at Chicago, Illinois. Sponsored by the University of Chicago and Illinois State Rifle Association. For programs write Russell Wiles, Jr., c/o Chicago University Athletic Department, Chicago, Illinois.

April 8-9: Morgan Park Military Academy Interscholastic Rifle Match. Sponsored by Morgan Park Military Academy. For programs write Major Paul Franson, Morgan Park Military Academy, Chicago, Illinois.

April 21-22-23: 16th Annual Convention of the Isaak Walton League of America. For programs write Kenneth A. Reid, General Manager Merchandise Mart, Chicago, Illinois.

\*June 10-11-12: Camp Grant Memorial Rifle and Pistol Tournament to be held at Camp Grant, Rockford, Illinois. Sponsored by Illinois State Rifle Association. For programs write Major Lester F. Stewart, 710 S. Main St., Normal, Illinois.

### INDIANA

April 9-10: Annual Indoor Small Bore Rifle and Pistol Tournament at Indianapolis, Indiana. For programs write Major Ralph C. Gery, 6181 Primrose Ave., Indianapolis, Ind.

June 5: Small Bore Tournament sponsored by Vincennes Rifle Club, Inc. For programs write P. A. Eluere, 208 South 8th Street, Vincennes, Indiana.

### IOWA

April 16-17: Annual Iowa State Rifle Association Gallery Rifle Matches at Waterloo, Iowa. Sponsored by Iowa State Rifle Association.

\*May 22: Restricted Class Small Bore Matches at Des Moines, Iowa. Sponsored by the Iowa State Rifle Association.

\*June 5: Second Annual Eastern Iowa Small Bore Tournament at Muscatine, Iowa. Sponsored by Muscatine Rifle Club. For programs write Dr. J. G. Johnston, 219 W. 7th St., Muscatine, Iowa.

\*June 18-19: Iowa State Small Bore Tournament at Des Moines, Iowa. Sponsored by Iowa State Rifle Association.

July 30-31: Iowa State .30 Caliber Rifle Tournament at Des Moines, Iowa. Sponsored by Iowa State Rifle Association.

\*August 13-14: Iowa State Pistol Tournament at Des Moines, Iowa. Sponsored by Iowa State Rifle Association. For programs of these events write G. G. Cooper, 816 Telephone Building, Des Moines, Iowa.

### MARYLAND

\*June 30-July 4: Eastern Small Bore Rifle and Pistol Tournament at Camp Ritchie, Maryland. Sponsored by the Eastern Small Bore Association. For programs write Tom Davis, c/o Remington Arms Company, Empire State Building, New York City.

### MASSACHUSETTS

July 30-August 1: The Annual Tournament sponsored by the United Service of New England at Wakefield, Massachusetts. This is a "big bore" meet which comprises a generous schedule of .30 caliber rifle events (also handgun matches) and attracts most of the National Match teams from the regular services as well as from the New England states. Programs should be available about June 1st.

### MICHIGAN

\*July 2-3-4: Eastern Michigan Small Bore Tournament at Detroit, Mich. Sponsored by Eastern Michigan Rifle and Pistol Association. For programs write G. F. Petersimes, 342 Philip Avenue, Detroit, Michigan.

### MINNESOTA

April 10: Red River Valley Small Bore Rifle Tournament at East Grand Forks, Minnesota. Sponsored by Red River Valley Rifle and Revolver League. For programs write W. G. Coulter, Box 1048, Grand Forks, North Dakota.

May 8: 3rd Annual Mankato Rifle Club's Outdoor Small Bore Tournament at Mankato, Minnesota. Sponsored by Mankato Rifle Club. For programs write B. Buckley, 221 Nicollet Avenue, Mankato, Minn.

\*July 23-24: 7th Annual Minnesota Arrowhead Small Bore Tournament at Virginia, Minnesota. Sponsored by Virginia Rifle Club. For programs write Andrew Bradish, 327 9th Street South, Virginia, Minn.

### MISSOURI

April 24: Annual Spring Match at Monett, Missouri. Sponsored by Monett Rifle and Revolver Club. For programs write P. Josseland, 620 Fifth Street, Monett, Missouri.

\*April 25 to 29: Heart of America Pistol Tournament at Kansas City, Mo. Sponsored by Kansas City Police Department. For programs write Sgt. D. E. Bates, Department of Police, Kansas City, Missouri.

May 1: Annual Pistol and Revolver Match at St. Louis, Missouri. Sponsored by St. Louis Pistol and Revolver Club. For programs write Walter H. Milius, 7560 Williams Avenue, Maplewood, Missouri.

June 11-12: Western Missouri Small Bore Championships at Pleasant Hill, Missouri. Sponsored by Pleasant Hill Rifle and Pistol Club. For programs write Gilbert Burr, Pleasant Hill, Missouri.

### NEW JERSEY

April 24: Off-Shoulder Championship at Swiss Hall, Union City, New Jersey. Sponsored by Metropolitan Rifle League. For programs write Edward Smelter, 3 Agate Avenue, Ossining, New York.

May 1: 4th Annual Amateur Rod & Gun Club 50 Meter Tournament—team and individual, at Plainfield Shooting Club Range, Plainfield, New Jersey. Sponsored by Amateur Rod & Gun Club. For programs write R. B. Champlain, 20 Robertson Road, West Orange, New Jersey.

May 14-15: Somerset County Small Bore Tournament at Plainfield, New Jersey. Sponsored by Somerset County Fish and Game Protective Association. For programs write W. Goldsack, 918 W. 6th Street, Plainfield, N. J.

May 27-30: Sea Girt Championships at Sea Girt, New Jersey. Sponsored by Association of New Jersey Rifle and Pistol Clubs. For programs write Ralph Coffey, Highland Park, New Jersey.



## NEW MEXICO

**May 8-15:** Coronado Cup Match sponsored by New Mexico Rifle and Pistol Ass'n. For programs write Burton L. Smith, Box 905, Santa Fe, New Mexico.

**July 2-3:** New Mexico .30 Caliber Rifle Championships sponsored by New Mexico Rifle and Pistol Association. For programs write Burton L. Smith, Box 905, Santa Fe, New Mexico.

## NEW YORK

**May 8 and 15:** Spring Tournament at Jamaica, New York. Sponsored by Long Island Rifle & Pistol Association. For programs write Joseph A. Hoehlein, 138-48 101st Avenue, Jamaica, New York.

**April 3:** Chicken and Merchandise Shoot at Roslyn, New York. Sponsored by Roslyn Rifle and Revolver Club. For programs write Peter Johner, Roslyn, New York.

**\*April 23-24:** Niagara Frontier Pistol and Revolver Championships at Buffalo. Sponsored by Buffalo Revolver and Rifle Club. For programs write Wallace A. Beattie, 79 Stevens Avenue, Buffalo, New York.

**May 14-15:** 8th Annual Hudson Valley Small Bore Championship at Poughkeepsie, New York. Sponsored by Poughkeepsie Rifle Club, Inc. For programs write Guy W. Moorehouse, 5 Oak Crescent, Poughkeepsie, New York.

**August 14:** 3rd Annual Small Bore All Range Championships at Poughkeepsie, New York. Sponsored by Poughkeepsie Rifle Club. For programs write Guy W. Moorehouse, 5 Oak Crescent, Poughkeepsie, New York.

## NORTH CAROLINA

**\*May 6-7:** 3rd Annual Kannapolis Small Bore Rifle Tournament at Kannapolis, North Carolina. Sponsored by Kannapolis Rifle and Pistol Club. For programs write S. K. Barringer, 604 East 10th Street, Kannapolis, North Carolina.

## OHIO

**April 2-3:** Ohio Gallery Team Matches at Fort Hayes, Columbus, Ohio. Sponsored by Ohio State Rifle and Pistol Association. For programs write F. L. Spencer, 298 N. Mulberry St., Wilmington, Ohio.

**\*April 23-24:** North Central Ohio Rifle and Pistol Tournament at Ashland, Ohio. Sponsored by Ashland Rifle and Pistol Club. For programs write Stuart M. Martin, Ashland, Ohio.

**May 22:** 3rd Annual Metropolitan Open Pistol Championships at Cincinnati. For programs write A. H. Chatfield, Jr., c/o Indian Hill Rangers, Maderia, Ohio.

**May 28-29:** Small Bore Rifle Tournament at Cleveland, Ohio. Sponsored by German Rifle Club. For programs write Joseph Kasper, 2116 West 101st Street, Cleveland, Ohio.

**May 30:** Zeppelin Club's Memorial Day Tournament at Akron, Ohio. Sponsored by Zeppelin Rifle Club. For programs write Merle Israelson, R. D. No. 8, Akron, Ohio.

**\*June 4-5:** 4th Annual German Rifle Club Tournament at Cleveland. Sponsored by German Rifle Club. For programs write L. A. Herrington, 3542 W. 45th St., Cleveland, Ohio.

**July 17:** 3rd Annual Ohio Valley Pistol Match at Chillicothe, Ohio. For programs write Phil D. Butler, Chillicothe, Ohio.

**\*July 29-30-31:** 5th Annual Zeppelin Open Tournament at Akron, Ohio. Sponsored by Zeppelin Rifle Club. For programs write Merle Israelson, R. D. No. 8, Akron, Ohio. \*2nd Annual All-American Pistol Championships at Cincinnati. Sponsored by Indian Hill Rangers. For programs write A. H. Chatfield, Jr., c/o Indian Hill Rangers, Maderia, Ohio.

**\*August 21-September 10:** The National Matches, including the Small Arms Firing School (first week), the rifle, pistol and small bore matches of the N. R. A. (second week) and the National Matches Proper (third week). At Camp Perry, O. Programs may be obtained from the N. R. A. about July 1.

## OKLAHOMA

**June 18-19:** 13th Oklahoma State High Power Rifle Matches at Okmulgee, Okla. Sponsored by Oklahoma State Association. For programs write Elmer C. Croom, Okmulgee, Oklahoma.

## PENNSYLVANIA

**May 8:** Lehigh Valley Spring Championships at Allentown, Pennsylvania. Sponsored by Bear Rock Rifle Teams. For programs write W. F. Gulekunst, 220 N. 9th Street, Allentown, Pa.

**May 21:** Outdoor Small Bore Shoot at Ellwood City, Pennsylvania. Sponsored by The Ellwood Rifle Club. For programs write D. M. Stamm, R. D. No. 2, Ellwood City, Pennsylvania.

**May 30:** 3rd Annual Memorial Day Small Bore Shoot at Harmony, Pennsylvania. Sponsored by Zelenople Rifle Club. For programs write Rev. Guy M. Wilson, Spring-Division Street, Zelenople, Pennsylvania.

**\*June 18-19:** 7th Annual Small Bore Tournament at Erie, Pennsylvania. Sponsored by Walnut Creek Rifle Club. For programs write George R. Loder, 1014 Cherry Street, Erie, Pennsylvania.

## TENNESSEE

**\*June 26:** Tennessee State Pistol Championships at Nashville, Tennessee. Sponsored by Nashville Pistol and Revolver Club. For programs write J. B. Milliron, 1111 Lischery Avenue, Nashville, Tennessee.

## TEXAS

**\*April 10:** South Texas Championship Small Bore Tournament at San Antonio. Sponsored by Liberty Pistol and Rifle Club. For programs write Homer Mathews, 826 W. Craig Place, San Antonio, Texas.

**\*April 16-17:** Wichita Falls Rifle and Pistol Tournament at Wichita Falls, Texas. Sponsored by Wichita Falls Rifle and Pistol Club. Small bore rifle matches registered. For programs write H. E. Barr, P. O. Box 1191, Wichita Falls, Texas.

**\*April 30-May 1:** Texas Small Bore Rifle Tournament at Fort Worth, Texas. Sponsored by Texas State Rifle Association.

**May 26-27-28-29:** Texas Big Bore Rifle Matches at Laredo, Texas. Sponsored by Texas State Rifle Association.

**\*June 18-19:** Texas State Pistol Tournament at El Paso, Texas. Sponsored by Texas State Rifle Association. For programs of these events write J. F. Callan, 405 E. 30th Street, Austin, Texas.

**\*June 20-21:** Police Convention Pistol Tournament at El Paso, Texas. Sponsored by City Marshals and Chiefs of Police Union of Texas. For programs write George R. Smith, P. O. Box 299, Dallas, Texas.

## VERMONT

**April 9-10:** Vermont Indoor Open Pistol Tournament at Northfield, Vermont. Sponsored by Vermont State Rifle and Pistol Tournament. For programs write Henry E. Bousquet, 75 Scarff Avenue, Burlington, Vermont.

**May 22:** Vermont State Big Bore Rifle Matches at Northfield, Vermont. Sponsored by Vermont State Rifle and Pistol Tournament. For programs write M. E. Carpenter, 6 Cedar Street, Montpelier, Vermont.

\* Indicates Registered Tournament.

## CHALLENGES

A twenty-man team picked from the best shooters of the Northern West Virginia Rifle League, which is an eight club shoulder-to-shoulder league, challenges any team, either from any one club or picked from several clubs, to a postal gallery match as outlined: Twenty-man team, with the ten high to count for team score. Ten shots in each of the prone, kneeling and standing positions, 50 feet, metallic sights, N. R. A. regulations. For further details communicate with R. C. Ballew, secretary P. O. Box 66, Mannington, W. Va.

## GUNS STOLEN

Stolen from the residence of Mr. C. R. Nagle, 1126 Monroe St., Topeka, Kansas, on February 5, the following:

1 Colt-Bisley six-shooter, 7/8" barrel, nickel plated, stag grips, .45 caliber, No. 202089.

1 Four chamber cylinder Colt, .41 rim fire, engraved, gold plated frame, pearl grips, No. 3229.

1 Colt double-action .41 caliber, six-shooter, round pearl grips, blue.

1 Engraved single-action Colt six-shooter, .45 caliber, fancy pearl grips, nickel plated, No. 309766.

1 Double-action Colt, .41 caliber, six-shooter, round grips, one pearl and one rubber, blue, No. 26051.

1 Colt engraved double-action six-shooter, caliber .45, round grips, pearl, nickel plated, No. 37668.

1 .32 caliber Colt automatic, engraved, blue, ivory grips, No. 116237.

1 .45 Colt automatic, blue, stag grips, No. 1509983.

1 Colt cap-and-ball six-shooter, nickel plated, old ivory grips, No. 34139, caliber .36.

1 Three in one brass frame knuckles with Dagger and pin fire cylinder, No. 3361.

1 Smith and Wesson .44 Special, blue, stag grips, No. 24243.

Any information regarding these guns, please write or wire collect to C. R. Nagle and receive reward.

Stolen from the laboratory of Lieutenant Colonel Charles O. Gunther the following firearms:

1 U. S. Army Automatic Pistol, caliber .45, U. S. Government property, No. 700239, together with U. S. Army holster.

1 Remington Double Derringer, caliber .41, short, serial No. 828, blued barrels.

Send any information pertaining to these guns to Lieut. Col. Charles O. Gunther, P. O. Box 822, Hoboken, N. J.

## NEW "RAILS" ORGANIZATION

**T**HE movement for organization among the railway riflemen, set in motion at Camp Perry last September, is definitely shaping up in an honorary fraternity of this interested group of marksmen called "The Rails." At the time of organization it was understood that this group would cooperate fully with the National Rifle Association and, in fact, look to that body for suggestions as to how to function most effectively.

Railwaymen will be pleased to know that recognition was given this new organization by the N. R. A. Executive Committee in their last meeting. The Vice-President, G. C. Schumaker, of Canon City, Colo., was appointed team captain of the U. S. Railwaymen's team for the 1938 National Matches.

We salute the new fraternity, "The Rails," and wish them complete fulfillment of their purpose to bring together in closer relationship the railwaymen interested in marksmanship. We know that in E. M. (Red) Farris, the secretary-treasurer, they have a live promoter and organizer, and we are sure he will be pleased to hear from you railwaymen who want to join up with "The Rails."



# DOPE BAG - - - Conducted by F. C. NESS

## TRADE DOPE

**V-Ring** is far more than a new cleaner. It is the best we have tested as a penetrating solvent and gun cleaner. It loosened metal fouling, removed lead and exposed the tool marks in bores "perfectly clean." It works fast and thoroughly and is harmless. Under our salt test it protected against rust for nearly two weeks. The K.W.H. Mfg. Co., 215 E. Lake Ave., Baltimore, Md., will soon announce it.

**A Tubular .410 Gauge, M-39** Springfield, bolt-action repeating shotgun is announced by Stevens. This low-cost 44-inch takedown gun has a 24-inch, full-choke barrel chambered for 3-inch shells, and it weighs about 6 pounds. The tubular magazine holds 4 of the 3-inch cartridges or 5 of 2½-inch length. A 3-shot plug comes with it.

**Busch Lightweight** spotting scope imported by Selsi Company, Inc., 43 W. 23rd Street, New York, N. Y., is a 20X prismatic monocular which weighs only 13 ounces. The objective is 46-mm. It is suitable for pistol spotting or 100-yard rifle under good conditions. The light weight makes it practical as a chuck glass for hunting.

**28 Gauge Autoloader** can be built into your Remington Sportsman to interchange with your 20 gauge barrel for Skeet. Ten already so altered by The Hart Arms Company are perking nicely.

**"Semper" Auxiliary Rifle Barrels** in .22 Hornet and .22 L. R. for 12, 16 and 20 gauge shotguns are listed in the new No. 30 Stoeger Arms catalog. Because of the concentric breech support and the headspace regulating lug, fine accuracy is promised.

**.22 Hornet and .22 Lovell** conversion jobs on suitable shotguns are being undertaken by J. R. Adriance, the set-trigger gunsmith of Lounsbury, N. Y. He also has reamers for the Improved 2-R Lovell for his regular rifle work.

**Wittek Manufacturing Company** has done a lot of development work on their Vaver rear sight and now there are 8 models for the 52W alone. There is a new one for the Sears Ranger and 416 Stevens. Target models have ¼-inch adjustments. There is a new low-price Junior target model with ¼-inch movements. Their new front sight, W-11, mounts on a scope block.

**New Quarters** for Fray-Mershon, Inc., at 515 West Windsor Road, Glendale, Calif., enable them to take on mechanical production of new items for gunsmiths.

**L. W. Jordan** has severed connections with Union Auto Specialties with the intent of improving service on his excellent reloading tool.

**Badger Shooters Supply** have a new shooting coat which is conservatively padded, feels fine and is very neat and dressy. We recommend it. Latest price is \$8.00.

**The Browning Arms Company** of St. Louis, is now offering name-engraving on their guns and cases at prices ranging from \$2.00 to \$10.00. They also have a standard grade, hand-engraved, 5-shot autoloader in 12 and 16 gauge at less than \$50.00. Also they have made their new selective single trigger, for Browning over-under shotguns, optional without charge. This trigger has simple and few parts. The order of fire is controlled by the thumb safety on top of the grip.

**10-X Manufacturing Company** has a new rifle coat of best grade government cloth, mercerized and Sanfordized to permit washing, leather-covered pads and all. This high-grade Imperial is \$9.00. Their similar Aristocrat, of different cloth, is \$6.50. Both endorsed.

**Smith's Trigger** for old-model 52 rifles will bring them up-to-date or better in the pull department. Gunsmiths can buy it for you, or it will be installed at \$30.00 by J. B. Smith, 3219 Adeline St., Oakland, Calif. From examination it is worth the cost for a pet old-model 52.

**W. B. Hummel**, 21 W. Orlega St., Santa Barbara, Calif., has a self-moistening target-paster contraption. Black and white rolls of gummed pasters, side by side in a metal or bakelite container are pulled out as needed over a felt pad which is kept soaked to save the tongue.

**Speed Lock** by R. F. Sedgley, Inc., is now regular equipment of the Sedgley Springfield Sporter. It cuts the striker travel from the standard ⅝ inch down to ⅜ inch.

**J. E. Gebby**, 1415 Richmond Road, Lexington, Ky., former General Motors "trouble shooter", has been designing, tool-making, gunsmithing and winning rifle matches for years, on the side. He is now devoting full time to commercial gunsmithing at the address above. All his work, viewed or tried by us, has been most excellent. He Diller-barreled our latest .220 Swift bull gun. The latest Gebby gadget permits shooting the .32 S. & W. Long in rifles. He now makes the new 2-R Lovell.

**Marble-Goss Sleeve Sight** is announced for the M-54, M-70, Springfield and Krag. There is also an extension receiver sight for the M-30 and M-1917. The early pilot of the sleeve sight had an improved safety for the Winchester bolt-action. Latest model not in yet.

**King Gun Sight Co.**, has added the Colt Woodsman to its improved handguns by now equipping these pistols with King ventilated ribs, rear-section adjustable sights and adjustable balancing weights for the magazines, of aluminum, steel and quicksilver or mercury.

**Ralph Pike**, P. O. Box 231, Kalispell, Montana, has a new self-setting set trigger which can be adjusted externally with a screw-driver for spring tension and engagement, for a pull of from ½ lb. to 3 lbs. Applicable to all bolts which cock on the opening motion.

## N. R. A. DOPE

**Cast Bullets.** It appears that Guy Loverin has been uncommonly successful with his design of lead-alloy gas-check bullets. His .22-caliber 43-grain bullet, Ideal No. 225438, has given match accuracy at 50 yards with very light squirrel loads in the .22 Hornet, and practical 200-yard accuracy with chuck loads equalling the high-velocity Hornet. His .25-caliber bullets, Bond No. 257616, 74-grain and Bond No. 257720, 89-grain, have given excellent results with proper loads in all .25-caliber rifles. His .30-caliber bullets, Bond No. 311910, 154-grain, and Bond No. 311890, 165-grain, have been equally successful, the latter designed for .30-30 rifles. All above bullets are 2 or 3 grains lighter in hollow-point form and equally accurate. For the .270 Winchester he has a 111-grain bullet, Bond No. 280780, which we have just begun to use. We also tried some .270-W, plain-base bullets, B. & M. No. 279111, which weighed 117 grains as Loverin cast them.

It seems that the Loverin bullets give best results when used .003 inch larger than groove diameter and thoroughly greased, up to the nose, and seated full neck-depth in the case. Loverin suggests also polishing and then wiping the necks inside with light oil to clean and smooth them and leave a thin lubricating film. The seating depth as well as the powder charge should be varied by experiment to suit the individual gun and the bullet. Short bullets should have the gas check and two bands inside the neck. Long bullets should fill the case neck when they are seated out to touch the rifling. They should barely touch or just escape touching the throat. Some combinations of gun, load and bullet are very sensitive to this, and when seating is exactly right the accuracy is appreciably improved. It is often as important to get the powder load exactly right, within a half-grain, by experiment with the individual combination of gun, load and bullet. Consider, then, all recommended loads as basic loads subject to variations, slightly up or down, for equivalent accuracy in different rifles of the same make, model and caliber. Such basic loads follow:

**No. 225438 in the .22 Hornet.** 3.0 and 3.5 grains and 5.0 grains Unique. 4.5 grains No. 80. 10 grains No. 4227. 10.5 grains No. 2400. This bullet does well with 3.1 and 3.5 grains Unique in the .22 Lovell. Also 8.5 grains No. 80 in the .219 Zipper, or 6 grains No. 5 Pistol Powder.

**No. 257616 in the .257 Roberts.** 6 grains Unique. 16 grains No. 4227. 20 grains No. 4198. 25 grains 3031. 19 grains HiVel No. 3. In the .25-20 Repeater try 8.0 grains No. 2400, and in the .25-35 or .25 Remington, 11.0 grains No. 80. In the .250 Savage reduce the .257 loads above at least 10%, or try 11.2 grains No. 2400. In the .25-20 Single-Shot try 5 grains of No. 5 or Unique.

**No. 280780 in the .270 Winchester.** 15.0 grains No. 4227, 17.0 grains No. 4198 or 25 grains No. 3031, or try 9.0 to 10.0 grains No. 80.

**No. 311910 in the .30-'06.** 15.0 grains No. 4227. 16.0 and 19.0 grains No. 2400. 22.0 grains HiVel No. 3. 23 grains No. 4198. 28.0 grains No. 3031. With bullet No. 311890 use 23 and 25 grains No. 4198. For the .30-40 Krag reduce the .30-'06 charges above at least 10%.



We once had many Belding & Mull bullets tested by the duPont laboratory at Brandywine. As I remember, we got up to 41 grains of No. 17½ powder in the .30-'06 behind the 169-grain Squibb gas-check bullet and had as much as 2400 f.-s. m.v. Some of the heaviest of the loads suggested above were tested by Loverin at 600 yards and 1000 yards. With the .257, .270 and .30-'06 these gas-check loads stayed in a five-foot group at 1000 yards with no marked vertical spread and no wild fliers. They were 20-shot groups, and 10 to 15 shots went into 3 feet, which is the 1000-yard 5-ring or bull diameter.

That is remarkable accuracy for cast bullets. Also they apparently were not unduly affected by wind. On the Lyman-48 sight, Loverin had 135 minutes elevation with a radius of 27½ inches, all his barrels being 24 inches. His previous elevation for 500 yards was 54 minutes on the .270 Winchester and 52 minutes on the .30-'06 receiver sight, a matter of 85 minutes added from 500 to 1000 yards or a bullet drop of 74 feet (890 inches) between the two ranges. Assuming 10 minutes was the elevation for 200 yards, we have 40 minutes added for 500 yards to compensate for a bullet drop of 18 feet (210 inches) between the two ranges. We of course are only guessing at the angle of departure as we do not know the muzzle zero of his outfit. With a right-hand twist the bullets drifted an average of 8 feet to the right of normal zero at 1000 yards, or 6 to 10 feet with different loads in the three calibers. At 600 yards his bullets penetrated an iron spray barrel, which indicates considerable power at that range.

In spite of the gas-check on the base and the good gas-seal obtained with over-size bullets, fusion becomes evident when the charge is too heavy. For example, Loverin uses .3115-inch diameter for a good seal but cannot use more than 28 grains 3031 behind his No. 311910 bullet with accuracy. Claude A. Miller tried the 169-grain Ideal Squibb gas-check bullet in his 7.62-mm. Russian rifle with 32 grains No. 3031 powder and had pronounced fusion, even with a bullet diameter of .313 inch. He laid the cause to his .310-inch .30-caliber gas-check diameter in his rifle's .314-inch groove diameter. After changing to .32-caliber gas-checks and a bullet diameter of .315 inch, he found that up to 33 grains No. 3031 could be used without fusion.

He coated the entire bullet with a 95%-beeswax lubricant, by dipping them in a wire holder. He reported: "extremely accurate at ranges up to 600 yards." His bullets were tempered 5-20 and weighed 166 grains. He used R.A. No. 8½ primers. He had minimum case expansion and reloaded some of his cases 20 times. His m.v. in a long military rifle was about 2000 f.-s. with the 33-grain load, by our own estimation.

Herman J. Sebert uses this same Ideal bullet, No. 311413, in his .30-'06 for shooting the qualification course. His bullet-size was .3095-inch and his load, 16.5 grains No. 80 in U. S. cases with F.A. No. 70 primers. His last score over the 200-yard course "D" was 243 with this load.

Willard B. Chappel uses the 170-grain plain-base "Pope" bullet and 9.5 grains Bulk Shotgun Smokeless in the .30-40 Krag, getting 5-shot groups smaller than ½ inch at 50 yards in prone practice with iron sights. F. L. Price so shot a 5-shot group with this load in his Krag that measured less than ½ inch outside, or 3/16 inch, center to center.

**Junior Small Bore Target Rifles** recommended by the N. R. A. as adequately equipped.

Those marked, SL, are equipped with shooting slings. Those marked, SW, have sling swivels. A sling can be had for about

\$1.00. Those not marked have neither, but can be equipped with slings for about \$2.25.

Prices given only for classification. Get exact quotations from your dealer. These rifles are not for sale by the N. R. A.

#### Low-Cost Single-Shot Training Rifles

Stevens-Springfield (bolt)	M-083	(about 5 lbs.)	\$5.75
Stevens-Buckhorn (bolt)	M-053	(about 5 lbs.)	6.45
SL—Savage (bolt)	M-3ST	(about 4½ lbs.)	6.40
Remington (bolt)	M-41P	(about 5½ lbs.)	6.40
Winchester (bolt)	M-68	(about 5 lbs.)	6.40
SL—Marlin (bolt)	M-100S	(about 4¾ lbs.)	5.95

#### Medium-Cost Single-Shot Training Rifles

SW—Mossberg (bolt)	M-35A	(about 8¼ lbs.)	\$11.25
SL—Iver Johnson* (Safety bolt)	M-2XA	(about 4½ lbs.)	10.30
SL—Stevens Walnut Hill (lever)	M-418	(about 6½ lbs.)	19.75

#### Low-Cost Clip-Loading Training Rifles

Winchester (bolt)	M-69	(about 5¼ lbs.)	\$11.95
Savage (bolt)	M-48	(about 5½ lbs.)	11.75
Stevens-Buckhorn (bolt)	M-056	(about 6 lbs.)	11.25
Stevens-Springfield (bolt)	M-084	(about 6 lbs.)	10.25
Marlin (bolt)	M-80E	(about 5¾ lbs.)	10.95

#### Moderate-Price Target Rifles

SW—Mossberg (bolt)	M-43	(about 8 lbs.)	\$19.95
SW—Mossberg (left-hand bolt)	M-43L	(about 8 lbs.)	24.35
SL—Sears Ranger (bolt)	M-50	(about 8½ lbs.)	20.00
SL—Stevens-Springfield (bolt)	M-416-1	(about 9½ lbs.)	24.75
SW—Savage (bolt)	M-19	(about 8 lbs.)	36.00
SL—Stevens Walnut Hill (lever)	M-417½	(about 8¾ lbs.)	38.50

\* Ivory bead front sight requires replacement with square post.

**100 Yard Pistols.** We fired eleven shots rapid-fire with the Model-B Hi-Standard pistol at 100 yards and the group measured only 2.40 inches. Ten shots measured 2.19 inches. The high-velocity load was Peters Wimbledon Match. The pistol barrel was clamped in the Hubalek machine rest which was kept located by a couple of elastic bands made of an inner tube. I used two finger-nails on the trigger and both thumb nails behind the guard for a uniform control.

We were, of course, amazed at seeing so fine a group form in the field of our Mossberg scope. Barr tried the same load and had a fine group of 3.90 inches. I tried Staynless by a third method and had an equally fine group of 3.70 inches. Some old rejected Palma Hi-Speed put nine shots in 3.52 inches and fresher Super Match put eight shots in 2.92 inches. With all loads tried our average 10-shot group at 100 yards was 4.19 inches.

We tried the Model-C Hi-Standard and used a 4-foot paper to catch the expected spread with old Lesmok .22 Shorts on which the bullet lubricant had dried. The 10-shot groups were 8.07 and 9.75 inches. With new Kleanbore Shorts we had eight shots in 5.30 inches at 100 yards, and 10-shot groups of 5.64, 6.55, 7.14 and 7.45 inches for an average of 6.69 inches. There was a light fish-tail wind, and we had not expected such pistol accuracy with the .22 Short from a 6¾-inch barrel.

We also tried some slow-fire shooting with the 8-inch Colt Camp Perry and without the rubber bands. With Super Match the first five shots went into 1.20 inches at 100 yards. Nine shots measured 3.20 inches and the 10-shot group was 7.05 inches. Our second group measured 4.20 inches. Dewar Match put nine shots in 3.90 inches and ten in 5.40 inches. Another ten measured 3.75 inches. Federal Airline put ten in 3.82 inches and Airline Xcess Speed made 6.60 inches. Staynless put ten in 4.45 inches and Wimbledon Match made 4.57 inches. The average 10-shot group at 100 yards, exclusive of Xcess Speed, was 4.89 inches for 70 shots. Four more groups on another day made it 4.90 inches for 110 shots.

For all .22 Long Rifle loads and both pistols that is an average of 170 shots in less

than 4½ inches at 100 yards. Our error of aim is 2½ inches with target sights on an eight-inch barrel at that range. Our offhand holding would further increase the spread, but apparently we could expect to hit a foot circle quite regularly. Even the .22 Short averaged under 6¾ inches at 100 yards and could hit that circle quite often. From our preliminary bore-sighting it seemed that neither load dropped much from the muzzle to the 100-yard butt, and all pistols shot remarkably close to where their sights aimed at 100 yards. Probably the rest-clamp affected their zero.

We tried a handload in the O.M. .38 Special revolver, but the barrel clamp did not hold this arm properly, and we had considerable vertical spread at 100 yards. We tried four 10-shot groups with and without rubber bands and both by using, alternately, one chamber and all chambers in the cylinder. The horizontals pleased us, with 3.25, 3.50 and 3.75 inches, but the verticals ranged from 11¼ to 14¼ inches. The best 10-shot group was more nearly square. It measured 7.63 inches.

**.32 Long Rim Fire.** This is a short-range cartridge which is a pretty good killer on small game, but not very reliable beyond 25 yards. We used an old and a new Stevens single-shot, both with open-type barrel sights, and our five-shot groups were .69 inch with Kleanbore and 1.5 inches with Stakleen at 25 yards. At 50 yards the five-shot groups with both loads average 6.50 inches in the old rifle and 3.54 inches in the new rifle.

**.348 Belted Bullets.** We tried the new Peters 210-grain load in the M-71 Winchester at 200 yards. Whereas the 150-grain load landed 4.25 inches low at 100 yards, the 210-grain landed 0.75 inch high. At 200 yards the 150-grain load landed nearly a foot low, while the 210-grain load landed from 2.65 to 4.20 inches low. The print of the 210-grain bullet was 5 inches higher at 100 yards and 8 inches higher at 200 yards. We had very little error of aim with our 8X Fecker scope.

We found that as the barrel heated the spread increased. With the 150-grain load there were seven in 3.80 inches at 200 yards, but the 10 shots made it 6.50 inches. With the 210-grain bullet the first five made 2.95 inches, and eight went into 3.50 inches, but



# • GUNSLICK •

## STOP GUESSING

Know accurately the temperature of your metal while casting and improve the uniformity of your bullets by using

The Whitlock Electric Thermometer \$10.00

F. W. WHITLOCK

709 W. Elk St. Freeport, Ill.

## BUY YOUR GUN NOW!!!

Trade your old gun for a new one. Bargain prices on new guns, revolvers and rifles. (Time payments—if preferred.) We also pay high prices for your rifle, gun, binocular or camera. Write today what you have and what you want. Free catalogue on request—Shipments prepaid.

Solomon's Sporting Goods Co., Inc.  
87-A Park Row, New York City



By a shooter for a shooter  
The Scope Stand of the Hour.  
Olive or black wrinkle Free-  
land 19" Tripod, \$6.00. Com-  
plete with box attachment to  
82" height, \$9.00. Guaranteed!  
Popular Items  
Do Luxe Arm Cuff, \$3.25; Su-  
perior Arm Cuff, \$2.75. Give  
arm circumference. NEW  
Freeland adjustable Fore-end  
Stop, \$2.85. Free folders.  
AL FREELAND  
1602 1/2 St. St., Rock Island, Ill.

## 10-X COATS, GUNCASES, GLOVES GUILD ELECTRIC CLEAN, N. Y.

the 10-shot group was 5.35 inches. One 10-shot group of 5.60 inches had seven in only 1.40 inches at 200 yards. This was the best average we had obtained with the .348 Winchester. We tried 10 shots with a pause after five to cool the barrel and got all ten in 3.70 inches at 200 yards.

The Peters ballistics give this 210-grain belted bullet an m.v. of 2510 f.-s. and a corresponding m.e. of 2940 ft.-lbs. Their .300 Savage load with a 200-grain belted bullet develops 2220 f.-s. m.v. and 2190 ft.-lbs. at the muzzle. Some new Peters belted bullet loads in the offing are as follows:

Cal.	Wt.	f.-s.	ft.-lbs.
.30-40	180	2380	2260
.30-40	225	2110	2230
.30-'06	180	2720	2960
.30-'06	225	2310	2670
.300 Mag.	225	2560	3270

**Bullet Shape** is important for long-range hitting because a favorable shape increases the ballistic efficiency or the ballistic coefficient ("C" value), cuts down air-resistance, shortens the time of flight and flattens the trajectory, or decreases the bullet drop. A good shape ("i"), or form factor) contributes to a high "C" value, together with sectional density ("S. D.") which is the proportion of length to cross-sectional area or of weight to diameter. A good "C" value or a high ballistic coefficient is important for long-range killing because it conserves energy or initial velocity, and a higher remaining velocity or striking velocity results. It is important at shorter distances because ballistic efficiency, born of a favorable shape and sectional density, decreases lag, and the less delay the less wind deflection.

Velocity plays a part also, but it is too obvious to mention, except to point out that our high muzzle-velocities do not mean much when we dissipate them by a poor shape or low sectional-density in the first 100 yards or so. The velocity which counts in killing is the striking velocity, not the muzzle velocity. When we have, at considerable distance from the muzzle, a high striking velocity we have all the other desirable qualities, because they are all helped by the same bitch, whose name is ballistic coefficient and whose initial is "C".

The sectional density of a bullet is easily determined by weighing it and miking it. Change the grain-weight to pounds by dividing by 7000 and then divide this by the square of the diameter or cross-sectional area. To get the true area of the bullet's cross-section, multiply its diameter by its diameter and then by .7854. To get the ballistic coefficient or "C" value, divide the sectional density ("S. D.") by the form factor ("i").

To find definitely the form factor or exact shape-value is the stumbling block. It is a recognition of the head radius expressed in calibers combined with the nose shape if blunter than a normal point. A flat-nose or hollow-point would increase air resistance, and the wider the flatter the poorer the shape and the greater the handicap or form factor. A long, slender, pointed bullet with a head-radius of 10 calibers, or about 3 1/2 inches, would encounter minimum air resistance and therefore a low handicap or form factor. Let us give it an "i" value of only 1/2 or .50. A similar bullet with a head-radius of 8 calibers, or about 2 1/2 inches, would have a slightly greater handicap or a relatively higher form factor, and we would give it a relative "i" value of .55.

Relative "i" values for pointed bullets of 6-caliber, 4-caliber, 3-caliber, 2-caliber, 1.5-caliber, 1.0-caliber and 0.5-caliber head-radii, would then have relative form figures of .60, .65, .73, .85, .95, 1.10 and 1.40, respectively. Blunter points, ranging down to round-nose with straight sides, would have greater handicaps and relatively higher form figures, ranging from 1.50 to 2.50 for the true cylinder. A hemispherical nose or round ball would be between these or about 2.00.

Now, if, in addition to the normal-point factor, our bullet has a flattened nose, we must measure the width of this flat and change inches to calibers by dividing it by the diameter or caliber of the bullet. Then, for every 1/10th caliber of flat at the tip or nose we must add about 1% to our form factor of that bullet. This will give us relative rating figures, which, though not arbitrary, are fairly accurate. By such rough methods the .22 Long Rifle Hi-Speed at 1300 f.-s. would have an "i" value of 1.15 and a "C" value of .093 with conical bullet, and with the sharp-shoulder (wadcutter) bullet, an "i" value of 2.30 and a "C" value of .0465. If the "i" value of the conical bullet were .85 the "C" value would be .137. The .22 Hornet H. P. bullet (S. D., .128) would have an "i" value of .80 and a "C" value of .162. With an "i" value of 1.05 it would have a "C" value of .122. The .219 Zipper 56-grain O. P. bullet with a sectional density of .160 and an "i" value of 1 would have the "C" value .160. The "S. D." of the 48-grain pointed Swift bullet is about .140. With a

form factor of .60 it would have a ballistic coefficient of about .222. All depends on the choice of form figure, which would vary with the individual computer.

As to lag or delayed speed of the above bullets, over 100 yards, we have some interesting figures from Captain Wotkyns, shown here:

Wt.	Bullet	M. V.	Lag
40	.22 L. R.	1100	.058
46	Hornet	2400	.075
56	Zipper	3100	.100
48	Swift	4140	.120

It will be noted the 48-grain pointed bullet loses its initial velocity over 100 yards quite rapidly and that it has twice the delay of the round-nose 40-grain, lead bullet, and nearly twice that of the .22 Hornet, 46-grain O. P. bullet. The 56-grain, open-point bullet of the .219 Zipper has less lag than the 48S, Swift bullet, probably on account of its greater weight or sectional density and in spite of its poorer nose-shape. The Hornet bullet would require a correction of 13 1/2 inches for wind deflection against 18 inches for the Zipper bullet under the same condition. The better-shaped 6-caliber 50-grain bullet which we use in the .22 Lovell would require less than 1 1/2 inches correction under identical conditions. The "i" figure would be .55, the S. D. .145 and the "C" value .262 for the .22-Lovell 50S bullet. In the .22 Niedner Magnum, .219 Zipper or .22 Lovell we can give this bullet 3100 f.-s. and it would require a wind correction of less than 1 1/4 inches under the identical condition which requires 18 inches correction for the 56-grain O. P. bullet at the same velocity. That is all according to Wotkyns' deductions.

My own figures above are not arbitrary, but rather relative, given only to indicate the importance of bullet shape and sectional density as summed up by the ballistic coefficient in the "C" value. To show what shape and density does to our initial velocity in a given cartridge, let me quote some Winchester figures for the .220 Swift over 200 yards: 46 O. P., 2360 f.-s. r. v.; 56 O. P., 2455 f.-s. r. v. and 48S, 2760 f.-s. r. v. The first and the last have the same initial velocity of 4140 f.-s. m. v. and the first two have the same form factor ("i" value) but the 56-grain has a higher sectional density and therefore a better ballistic coefficient, which accounts for its higher remaining velocity at 200 yards, although it started about 300 f.-s. slower at the muzzle. In fact it has less delay or lag even than the 48S bullet and therefore less wind deflection.

We have very few well-shaped and well-proportioned bullets in factory ammunition. I can think of only two worth mentioning. One is the Remington 180-grain Bronze Point, m. v. 2700 f.-s. in the .30-'06. This has an 8-caliber head and a coefficient of form or "i" value under our minimum (.50) previously mentioned. It has good sectional density of .345 and an excellent ballistic coefficient, or "C" value, of .555. It has a remaining velocity of 2525 f.-s. at 100 yards. A similar bullet with an open point or flat tip has an "i" value of .70 and a "C" value of .385 and the same "S. D." With the same m. v. it has an r. v. of 2460 f.-s. Everything else equal, a better shape and "C" value gave the Bronze Point more than 60 f.-s. higher striking velocity at only 100 yards from the muzzle. The other bullet in mind is the Winchester 100-grain pointed for the .270-W. with a m. v. of 3540 f.-s. The "S. D." is .235 and the "C" value .320. The r. v. at 100 yards is 3280 f.-s. The ideal shape for ballistic efficiency is represented solely by the old 180-grain target bullet for the .280 Ross which cleaned up all long-range matches. This bullet will be discussed in detail in the near future.





The Arms Chest is an open market trading post where manufacturers, distributors, purveyors of professional services, and our own readers may cry their wares to fellow sportsmen at a modest cost. Returns are uniformly excellent—scores of advertisers have reported truly phenomenal results. Advertisements are accepted from members of the National Rifle Association, for their individual and personal transactions exclusively, at 8¢ per word INCLUDING NAME AND ADDRESS, minimum charge \$1.20. For all dealers' advertisements the rate is 10¢ per word INCLUDING NAME AND ADDRESS, minimum charge \$1.50.

In describing the condition of guns advertised the following standard phrases must be used: **Perfect** means factory condition. **Excellent** means new condition, implying negligible amount of use. **Very good** means practically new condition, implying very little use, resulting in no appreciable bore wear and very few and only minor surface scratches or wear. **Good** means moderate use with some finish worn off, and only moderate bore wear with no pits and nothing worse than a little roughness in the bore. **Fair** means reasonably hard service, reasonable wear inside, and nothing worse than a few very minor pits in the bore, implying the gun is practical and sufficiently accurate for hunting purposes. **Poor** means marred appearance and pitted or badly worn bore.

#### THE MEMBERS EXCHANGE

This section provides a quick, inexpensive means for disposing of guns and accessories no longer needed, or for the purchase of more suitable similar items. We urgently request that a full description be given of every article offered, and its condition (see complete instructions above), for transactions of this sort must be based entirely on good faith and mutual satisfaction. Deliberate misrepresentation will of course result in immediate expulsion from N. R. A. membership.

#### FOR SALE

**THE TWENTIETH CENTURY GUN.** A fine 12 gauge English 5/4 lb. ejector with a new system of taper boring and using a 2" shell now made by Remington. It develops more velocity than the regular 2 3/4 with a fine pattern and light recoil. The most important shotgun development in recent times. Liberal discount to regular dealers. New catalog ready. Stamp please. Kimball Arms Company, 220 Cambridge Road, Woburn, Mass. 4-38

A WINCHESTER 52, Greener hammerless 12 gauge, L. C. Smith 12 gauge high grade, Krag with custom made stock, Savage 22 hi-power with custom stock, and tip-up S&W Russian 44 cal. All fine condition. Stamp please. A. Wellens, Newtown, Pa. 4-38

NATIONAL Match Colt .45 Auto late, very good, \$28.50. M63 Winchester .22 L. R. Auto Rifle new, perfect, \$24.00. M11 Remington Auto Shotgun 12 Ga. full choke, very good, \$25.00. Roger Pence, 516 Main St., Bloomington, Ill. 4-38

225 ODD numbers Arms and Man. American Rifleman October 1920 to December 1936. Lot for \$5.00. J. T. Spofford, 42 Williams Street, Malden, Mass. 4-38

WINCHESTER #94, .38-55, excellent to perfect, with Ideal loading tools. \$28.00 cash. George Surgi, 6160 Catina, New Orleans, La. 4-38

WINCHESTER 52 Slow Lock, V.G., \$20.00. Remington Automatic 12-28 modified, excellent, \$30.00. New Fecker 3/4", 8X scope and mounts, \$32.00. New Fecker 1 1/2" scope and click mounts, \$50.00. Jay Wright, Newark, New York. 4-38

Groups of figures are computed as one word. Spell out all descriptive words; abbreviations may lead to serious misunderstandings and thus impair the effectiveness of your ad. Box number or blind ads not accepted. Please give complete name, so as to facilitate the proper issuance of money-orders. All advertisements must be accompanied by cash or they will be disregarded. Final closing date is the 5th of the preceding month. Please print all advertisements plainly—we cannot be responsible for errors due to illegible writing.

ACE, excellent, \$30.00. Enfield (Winchester) remodeled at Arsenal, P. G. Parkerized finish, Pacific rear, excellent, \$30.00. Shooting Master 38 cal., very good, \$35.00. Bisley 44 Special 5 1/2", Patridge type sights, barrel and cylinder new, rest very good, factory reconditioned, \$30.00. WANT—B&L Prismatic scope, Super Targetspot 10, Zeiss Delatam. C. L. Ellis, 2040 Jefferson, San Francisco, California. 4-38

ZEISS Silivarem, \$45.00. Mirakel Daylux, \$25.00. V. H. Parker Single Trigger 12 Ga., 26", modified improved, case, \$65.00. 94 Winchester, highly engraved, circassian wood pistol grip, \$50.00. All excellent. H. Steck, 4828 W St., N. W., Washington, D. C. 4-38

WINCHESTER 52, speedlock, restocked. Lyman 5A scope with case. Two Krag, restocked. Other equipment. Anthony Michael, 12217 Normal Ave., Chicago, Illinois. 4-38

EXCELLENT 54 Hornet, altered bolt, low mounted Weaver 29S scope, 48 rear and red bead front, \$50.00. Perfect Belding and Mull 28 Hornet tool complete \$10.00. Pacific scale and weights \$5.00. Ralph Bolton, Alexandria, La. 4-38

52 SPEEDLOCK, standard, 17A and leaf, V.G. to excellent, \$37.50. Earl Ehling, 610 E. 11th St., Winfield, Kansas. 4-38

**SPECIAL PRICES!** Hi-Standard Pistols, H&R Sportsman, Sedgley Rifles, Winchester M70. Pachmayr revolver grips, \$1.35, 10 point grips, \$3.38. A-1 Gov't. Slings 50¢, Swivels 35¢. H&R #922 .22 Cal. \$8.75. Benjamin Air Pistol, \$6.75. Free catalog. J. Warshall & Sons, First & Madison-BB, Seattle, Wash. 4-38

FECKER Scope 10X, 3/4", excellent, 1/4 micro-meter mounts, \$30.00. Clyde Winfield, Pompton Plains, N. J. 4-38

LATEST Parker DHE 12-26, Winchester Trap Guns, others. W. B. Arey, Salisbury, N. C. 4-38

REMINGTON Model 37 Rangemaster 22 cal., excellent condition, with Brauer Sheepskin case. P.O. M.O. \$50.00. R. C. Ward, 321 E. Gittings Ave., Baltimore, Md. 4-38

.22 H.P. M'99 Savage, V.G., \$25.00. Colts .41-43 Frontier, V.G., \$12.50. .35 M'95 Winchester, 350 cartridges, 500 SP bullets, reloading tools, \$40.00. Vernor Sackett, Salem, Oregon. 4-38

**FACTORY SECONDS** Recoil Pads \$1.00, postpaid. Complete with screws for attaching. You save \$2.25. Send outline of gun butt. Prompt delivery and satisfaction guaranteed. Incor Mfg. Co., Terminal Bldg., Youngstown, Ohio. 4-38

25-20 SAVAGE, model 23B, scope sight, good, \$19.75; Remington model 12, .22 rifle, good, \$9.75; Stevens model 94, .22 target, as is, \$4.75; Remington 44 converted C&B, holster, \$3.75; Ranger 4X scope, mike mounts, very good, \$4.75. J. A. Brown, 1300 Lowen St., Wilmington, Calif. 4-38

30-S REMINGTON '06 cal., excellent, quick detachable swivels, sling, 48 rear, 100 cartridges, Berlin case, first money order \$48.00. L. C. Moore, Devils Lake, N. D. 4-38

**PEERLESS** Rifle Stocks, Seconds. These are the same as the regular Stoeger Peerless rough turned Stocks but are seconds for reasons stated. Light or irregularly colored stock otherwise perfect, \$3.75. Slightly undersized outside width, otherwise perfect, \$3.50. With knot or check in forearm or stock without influencing strength, \$3.25. Checks in butt but otherwise perfect, \$2.75. Checks or knots near action or pistol grip, \$1.75. Stoeger Arms Corp., 507 5th Ave., New York. 4-38

S. A. COLT, 7 1/2", .32-20. Like new (1937). King Sights, Buffed nickel finish. S. A. Colt, 7 1/2", .44 S&W Special. Barrel and cylinder new condition. Blue. \$15.00 each. L. S. N. Walsh, Delmar Blvd. and Belt Ave., St. Louis, Mo. 4-38

WINCHESTER 52, H.B., speedlock, Redfield front, 48J, excellent, \$42.00. Targetspot 10X, excellent, \$40.00. B. K. Evans, Lansdale, Pa. 4-38

LATEST Model Colt .22 O.P., perfect, with special large hand finished inlaid grips, \$30.00. Al Olston, Athol, Idaho. 4-38

EXCELLENT, new 54, 30-06, late, heavy Sniper, 48, 17, beavertail stock, shot 40 times, sacrifice. Karl M. Foster, Great Barrington, Mass. 4-38

**ANTIQUE FIREARMS.** 2000 specimens in stock. 1937 printed-illustrated catalog \$1.00. Large Special List 20¢. Far West Hobby Shop, 406 Clement Street, San Francisco, Calif. 4-38

PACIFIC Reloading Tool for 38 Special and 38 A.C.P., with high speed dies, includes full length resizing dies, \$25.00. No. 5 Powder Measure, \$5.00. Fairbanks Scale, \$12.00. Lyman Lubricator and Resizer, \$7.00. B&S 1-inch micrometer, \$3.00. Herbert Raeder, 18 Queen Anne Rd., Bogota, N. J. 4-38

CUSTOM .257 Roberts, German Spanish Mauser, fine circassian, inlays, cheekpiece, engraved, value \$125.00, sell \$85.00, brand new. Custom .220 Mauser Swift, fine crotch stock, inlaid scene, cheekpiece, fine engraving including silver bear in relief, value \$150.00, sell \$100.00, brand new. Roy Vail, Warwick, N. Y. 4-38

\$3.00 EACH: Tools, Winchester 25-20, Ideal 28-30, 32 S&W (for 32 automatic), 32-40, 38-50, 38-56, 44-40. #257312, #257325, #285228, #319261, #456122, #2 Recapper. Pacific W.I. New 48W \$8.50. Sheldon Brink, Walton, N. Y. 4-38

STANDARD Winchester 54 Hornet. Latest Standard Winchester 54 30-06. Winchester 52 Sporter. Savage 99G 300. 256 Buffalo Newton. 10" Camp Perry. Description, prices on request. LeRoy Erisman, Christiansa, Penna. 4-38

SERVICE Springfield 35 National Match, \$45.00, C Stocks, new perfect. WANT—52, condition immaterial. D. H. Mosher, Salem, Oregon. 4-38

WINCHESTER 52, Heavy Barrel, Slow Lock, excellent, \$25.00. Krag, excellent Stoeger Sporting Stock, Ripe, peep rear, and Springfield front sights, \$25.00. John Paine, Bryan, Ohio. 4-38

COLTS Collectors! Photograph and description of my 1847 Whitneyville Walker 4x6, 25 cents. Geo. McQueen, 5111 Grant St., Omaha, Nebraska. 4-38

#### ACTION—WITH UMPH!

"I advertised two used rifles last month and received 76 replies in the first twenty days. That's what I call ACTION—and plenty of it!" —Mississippi.

Hundreds of members know, from personal experience, that the Arms Chest will produce prompt action and quick sales on guns and shooting accessories. But did YOU know that scores of other items are being sold regularly thru these columns?

Just glance through the ads in this issue. You'll find mightily attractive offerings on cameras, musical instruments, jewelry, boats, instruction courses, puppies, typewriters, etc., etc. Whatever you have to sell, we can help you!

**Final closing date for the May issue is April 5th. See full instructions above.**



# New STEVENS TARGET RIFLE

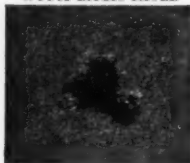
.22 LR

\$24<sup>75</sup>



Model No. 416-2

PROOF GROUP  
WITH EACH RIFLE



## PROOF of Accuracy with each Rifle!

Accuracy guaranteed. A five shot, machine rest proof group, furnished with each rifle, shows exactly what the rifle you buy will do. 28 inch, heavy, tapered, round barrel. 5-shot clip magazine. Speed lock. Adjustable trigger pull. Stevens aperture rear sight. Post front sight. Telescope can be mounted in the sighting line of the iron sights.

American walnut stock, oil finish. 1 1/4 inch leather sling. Adjustable front sling loop. Many more advanced features. Available with Lyman No. 57 Rear Sight and Stevens No. 25 hooded front sight with 3 removable inserts at slightly higher price. See this rifle at your dealer's.

Send for descriptive literature.

**J. STEVENS ARMS COMPANY**

Division of Savage Arms Corporation  
Dept. MS-11, Chicopee Falls, Mass.

## MATCH RIFLES— MATCH AMMUNITION

New ammunition and rifles now ready

We can now fill orders from our Dallas stock for the New Model Winchester 52 in all combinations, as well as the New Remington Model 37. Specially selected and retested rifles must do under 1 1/2 inch average at 100 yards center to center measurements.

Remington Model 37 complete..... \$69.95

Winchester Model 52, Marksman Stock, Heavy Barrel, with the following sight combinations:

No rear, Lyman 77 Front.....	59.80
Lyman 48-FH and 77 Front....	71.25
Marble-Goss and 77 Front.....	71.80
Vaver 35 Miel and Vaver Front.	78.40
Lyman Extension and 77 Front.	72.90

Any of above rifles specially selected and retested by us—test groups furnished with rifles—add \$5.00.

All of above prices include carrying charges to you.

Match Ammunition  
Prices are F.O.B. Dallas

Every case is tested by us. It must pass our rigid tests or we do not send it out to you.

Palma Match VEEZ 38, per 1000...	\$7.50
Palma Kleenbore XXX8.....	7.50
Super Match.....	7.50
Precision EZXS HS-38.....	7.50

Our stock of shooting equipment is complete.

Write for new catalogue.

Southeastern distributors official N. R. A. Targets.

## THURMAN RANDLE & CO.

208 N. Akard St., Dallas, Texas



U. S. Army Prismatic  
Rifle Sight and  
Observer's Scope

\$7.50

Case, Army Krag Rifles, 30/40; U. S. Army, Oil Preserved, Leather Gun Slings, new 75¢ each. Used, 35¢ each. Rifle parts, Camp Equipment, Army & Navy Surplus Goods. Send 10¢ for NEW, complete, 1938, big catalog. Refunded on purchase of \$1.00.

Globe Sales & Mfg. Co., R-624, Broadway, New York

## EFFICIENT VERMIN LOADS

All Calibers

SMITHS CUSTOM LOADS

Middlebury

Vermont

9"x4" and 4 1/2"  
SOUTH BEND

LATHE

New Low Terms

ONLY \$6.00 A MONTH

Ask for FREE Catalog

AT LOW AS \$85

LESS MOTOR DRIVE

WRITE for details on this new 9-inch Workshop Precision Lathe—back geared, screw cutting. Made in 3', 3 1/2', 4', and 4 1/2' bed lengths with distance between centers of 17", 23", 29", and 35". Takes 38 attachments. Weight \$20 lbs. crated.

Ask for catalog 15¢—sent Free. Postpaid.

SOUTH BEND LATHE WORKS

871 E. Madison St., South Bend, Indiana, U.S.A.

## I SAVE YOU MONEY

My No. 11 Catalog showing over 500 items. This book explains its use to improve shooting. Send 15¢ in stamps for your copy today.

P. J. O'HARE

America's Largest Manufacturer and Importer of Rifle Accessories  
552 Irving Avenue, Maplewood, New Jersey

1 LATE Model 54 Winchester 270 caliber, 20 in. barrel, ramp front sight, 48W Lyman rear, very good shooting condition, few scratches on stock and fore piece, \$42.00. 1 late Model 54 Winchester 22 Hornet, 24 in. barrel, ramp front sight, 48W rear, excellent condition, \$42.00. 1 Browning 16 gauge shotgun, 26 in. barrel, full choke, one rust spot on outside of barrel, otherwise it is in very good shooting condition, \$35.00. All these guns delivered at the prices stated. Guaranteed as advertised. Fred Schleifer, 321 So. 33rd St., Billings, Mont. 4-38

SERVICE Springfield, new barrel, receiver, stock by Armory, \$29.00. Heavy 219 Zipper Winchester S.S., custom built, bore perfect, Sedgley rechambered, \$40.00. Russell Elder, Griffin, Ga. 4-38

STANDARD 52, Speedlock, 17A, sling, extra clip, \$30.00; Savage 740-C, 12 gauge, Compensator, pad, skeet and modified tubes, \$45.00; both excellent. W. H. Floyd, 2113 North Oakland Street, Arlington, Virginia. 4-38

SELL 45 S&W Triple Lock, excellent in, good out, \$30.00. Excellent 30-06 Winchester Enfield, \$12.50. Model 69, 22 Winchester, new, \$8.00. 45 New Service, late model, excellent in, fine out, \$22.25 holster, \$20.00. D. B. Conley, Swampton, Ky. 4-38

FOR SALE: Colt Ace, perfect. Recently purchased new \$40.00. W. Mitchell, 1634 49th Court, Cicero, Illinois. 4-38

KRAG Sedgley Hornet SS, custom stock, Lyman telescope with micrometer mounts, Pacific ramp and receiver sights, \$30.00. Perfect. H. Vittinghoff, 3 Hathaway Lane, White Plains, N. Y. 4-38

COLLECTORS: Carved Powder Horn Hudson Valley 1756; Bisley 22-7 1/2", \$29.00; U. S. Pistols, Muskets, Carabines, others. WANT in trade Colts, S&W's, J. C. Harvey, 971 Commonwealth Ave., Boston, Mass. 4-38

LUGER 7.65, 6 inch, good, 100 rounds, \$25.00. Savage 32, \$8.00. WANTED—Colt Woodsman. Fred Thomas, Mediapolis, Iowa. 4-38

CASH: New Colt .25 Automatic, blued, perfect, \$13.00. New Savage Sporter #23AA, perfect, speedlock, .22 caliber. \$15.00. WANTED—45 belly gun, 27" barrel. Ben Vaupel, Mt. Vernon, Indiana. 4-38

52 WINCHESTER H. B., excellent. Colt P.P. 5", .38, excellent. Colt O.M. .38, 6", very good. Colt S.A. .45, 7 1/2", very good. Harold Posson, 832 Armour Road, North Kansas City, Mo. 4-38

SPRINGFIELD Sporter excellent fired one clip best cash offer. Rifleman 1925 to 1937. How much. C. W. Hodge, Coeur d'Alene, Idaho. 4-38

W52 STANDARD, scope blocks, sling, excellent, \$32.00. 45 Auto Government Model, good, \$15.00. Chet Johnson, Vermillion, So. Dak. 4-38

PEDIGREE, Cocker Spaniel Puppies, age three months. Best of Breeding. Black, Black and white. Females \$20.00. Males \$25.00. Pictures if interested. Lawrence Weber, Wabeno, Wisconsin. 4-38

48J, GOOD, \$5.50; excellent, \$6.50; like new, \$7.50. Parker Hale, new, \$11.75. Zeppelin Arms, Akron, Ohio. 4-38

PERFECT Winchester 52 Sporter stock, swivels, strap, \$20.00. One each 12, 16, 20 gauge Winchester Model 12 shotgun, brand new, \$32.50. Remington Sportsman Automatic 12 gauge shotgun, new, \$38.00. Floyd Johnson, 374 Cass, Joliet, Illinois. 4-38

CUSTOM National Match Springfield Deluxe Sporter, circassian stock, checkered, engraved front plate, trigger guard, butt plate, Lyman sights, new, cost \$175.00. Sell for \$75.00. Custom Krag Springfield, curly maple stock, recoil pad checkered, Redfield rear, ramp front sights and Weaver 29S scope mounted. Cost \$150.00. Sell for \$50.00. Money orders. Elmer C. Breuer, 3616 Traynam Rd., Shaker Heights, Cleveland, Ohio. 4-38

SKIERS! Free Ski Catalog. Fishermen! Free Tackle Catalog. Gun Clubs! Send 25¢ for Medal, Award Catalog. J. Warshal & Sons, First & Madison-BB, Seattle, Wash. 4-38

TARGETSPOT 8X, excellent, \$38.00. 256 Newton just rebarreled to 257 Roberts by Sukalle, double set, Peep, sling, very good, \$37.00. Noske 2 1/2 power, elevation only, \$19.00. Savage 45, 30-06, pad, drilled for scope, very good, \$27.00. W54 30-06, Lyman 48, pad, sling, not N.R.A., excellent \$40.00. Pacific Scale, weights, new, \$5.00. Pacific Tool, 220 Swift, new, \$16.00. 190 OP Hornet 46 gr. bullets, \$1.00. 120 Swift empties fired once, \$1.00. 270 22 WCF cartridges, \$2.50. Jack Reid, Glendive, Montana. 4-38

B&L PRISMATIC Scope 19.5X perfect \$42.50. Fecker 1 1/2" x 8 precision 3/4" mounts sole leather case excellent \$50.00. Stevens 44 1/2 Heavy Hornet. William Baxter, Sevenmile, Ohio. 4-38

WE OFFER a few ML rifles in shooting condition. List on request. Kimball Arms Company, 220 Cambridge Road, Woburn, Mass. 4-38

THE AMERICAN RIFLEMAN

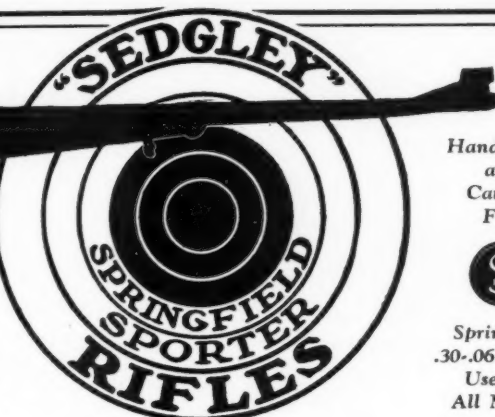


## Now Equipped with New Safety Firing Pin Patented and New Speed Lock

In Twelve calibres for big or small game. Or, we can book your order for a custom-made rifle to your own specifications. \$71 up to \$1000.

**R. F. SEDGLEY, Inc.** Established 1807  
2311-17 N. Sixteenth St., Phila., Pa.

Pacific Coast Representative; King Gun Sight Co.  
171 2nd St., San Francisco



Hand Book  
and  
Catalog  
Free



Springfield  
.30-.06 Actions  
Used on  
All Models

CORRESPONDENCE Course covering 17 Civil Service Examinations. Cost \$70.00. Need money, best offer. Earl Kennedy, Route 3, New Oxford, Pa. 4-38

COLT .380 Automatic, good, \$11.50. .32-20 Savage Sporter, very good, \$16.50. No trades. Fred Lowery, Upper Sandusky, Ohio. 4-38

SPRINGFIELD, sporter stock, Pacific peep, good outside, fair inside, \$20.00. 23B Savage 25-20, good outside, very good inside, \$12.50. Waffenfabrik Military Mauser, \$12.50. 30-06 Sedgley Mauser, very good. \$30.00. 17 Remington 20 ga. Pump, good condition, \$20.00. WANT—5 or 6X Scope. F. L. Ferguson, Roaring Springs, Texas. 4-38

SALE OR RENT. My large summer cottage on Lake Champlain. Completely furnished. Electricity. Write for photo and particulars. J. Bushnell Smith, Middlebury, Vt. 4-38

CAMP PERRY 10", excellent, \$22.50, M.O. or C.O.D. on \$5.00 deposit. V. B. Erickson, 1225 Byron, Palo Alto, Calif. 4-38

MALCOLM 8X with Lyman click mounts, very good, \$18.00. WANT—Lyman 5A with click mounts. J. L. Polk, 3 Lakewood Place, Troy, N. Y. 4-38

KENTUCKY Rifle converted to Flintlock, \$25.00, curly, brass trim. 1810 Springfield Musket Flint, \$10.00, good. Revolutionary St. Etienne Flint, \$10.00, cracked fore-end. Colt Army Shooting \$6.50. North breech loading Flint, \$10.00, fair. Bronze lantaka cannon, \$18.00. WANT—Mauser actions. Roy Vail, Warwick, N. Y. 4-38

ALL VERY GOOD. Sauer-Suhl 16 gauge double barrel and 16 gauge and 9 m/m barrel, automatic safety, \$95.00. Belgian Sporc double barrel choked 12 gauge, \$40.00. Triple barrel 20 16 gauge one 8 m/m, Steigleider-Suhl with Ajax 6X scope, \$75.00. Diana air rifle, \$5.00. Paul J. Engel, Spuyten Duyvil, N. Y. 4-38

COLLECTORS! Winchester Model '03 Deluxe, perfect in and out, \$25.00. S&W 1891 Single Shot Target Pistol 22 long rifle, excellent in and out, \$23.00. Reising 22 L.R. Auto pistol, perfect in and out, \$28.00. Model 90 Winchester pump 22 Short, new factory grease, \$15.00. Benjamin Rice, 2924 Octagon Road, Camden, New Jersey. 4-38

TWO Fecker Small Game Scopes, 3X and 4X, first class condition, mounts and blocks, each \$20.00. Walter F. Simon, 108 State Office Bldg., Madison, Wis. 4-38

WINCHESTER 54, .257 Roberts, scope bases, open sights, Winchester Target Stock, shot 180 times, excellent to perfect, \$35.00. Colt Officers Model .22, factory and Roper grips. Purchased 1937. Perfect, \$29.00. G. A. Stanian, 62 Rossmore Place, Belleville, N. J. 4-38

LUGER 7.65, 3-3/4" barrel, very good, \$18.00. Bacon .31 Pepperbox underhammer, good, \$4.50. Colt New Line .32 rim, nickel, good, \$4.50. French Signal Pistol, brass, 4" bbl., 1" bore, excellent, \$4.50. 150 rounds .35 self-loading, smokeless, 180 grain, metal patch, \$3.50. Winchester 1886 .38-70, 24" bbl., good, offers wanted. R. O. Huddleston, Linwood, Mass. 4-38

.410 WINCHESTER Pump, skeet, new, never fired, recoil pad, \$29.50. Savage 19-L speedlock target, Lyman 48-Y and 17-A, sling, sling pad, excellent, \$35.00. Savage .12 automatic, 30", full, new, cost \$43.50, sell \$32.00. Karl Hansen, 79 Oakwood, Bogota, New Jersey. 4-38

## TILDEN MOUNTS ONLY—



Have the important improvements that make them by far the most reliable, lightest, lowest, practical bridge type mounts of today. Fully pictured and described in late catalogue. Special prices on Weaver and European highest quality scopes and our mounts fitted to your gun, as follows: \$22.00 for the 29S Weaver; \$37.00 for the \$50 Weaver; \$48.00 for a low power, high quality European scope. IDEAL SIDE LEVER SAFETY FOR YOUR 70 WINCHESTER, \$2.50 postpaid or installed. Only small screw driver required to install. Word "Fire" appears when pushed forward or released. Safeties are deeply corrugated, hardened and nicely blued. Write: TILDEN MANUFACTURING COMPANY, 2750 No. Speer Blvd., Denver, Colo.

## Bargains in New and Used Glasses!

Nature, sport and hunting field glasses: all makes, sizes and powers, \$3 upward. Telescopes, spotting and riflescopes. Microscopes. Magnifiers \$1 upward. Compasses. Repair work. Glasses exchanged. Catalog Free. Goods on approval. Address Box D.

**J. ALDEN LORING, OWEGO, N.Y.**

BEAUTIFUL Eagle Luger, nearly new condition, \$29.50. Very good, Luger, \$19.50. H. Dickson, Buckeye Lake, Ohio. 4-38

REMINGTON "Sportsman" 12 gauge, ventilated rib, Cuts, 4 tubes, beautiful custom stock 2 1/2 x 1 1/4 x 1 1/4, cost \$120.00, sacrifice \$65.00. 52 Winchester Speedlock, 48 rear, Globe front, custom stock, very good, \$35.00. N. L. Geary, Stover, Mo. 4-38

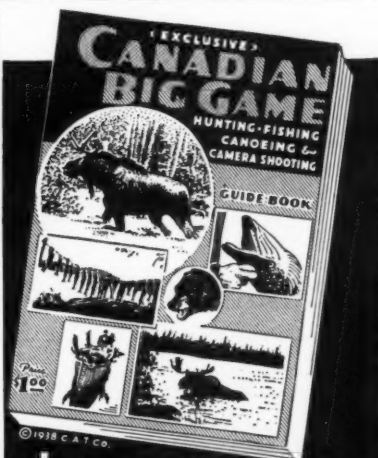
22 HORNET S.S. U.S. Winchester Musket, 41 Lyman rear, Lyman blocks, sling, very good, \$22.50. Remington 14 Carbine, 25 Cal., new G. D. Studs and Whelen sling, very good, \$22.50. Remington 25A Deluxe, 32-20, 2 boxes Highspeed cartridges, excellent, \$27.50. WANT—Remington 25R 25-20 Carbine. P. R. Lilly, Valdosta, Ga. 4-38

STEVENS 417 Hornet, 5X Winchester scope, good, \$25.00. WANT—Enfield and tools. G. Floyd, Loomis School, Windsor, Conn. 4-38

USED AUTOMATIC PISTOLS! Spanish .32, good, \$6.95, Remington .32, good, \$8.50, Colt .32, fair, \$8.50, Luger .30 3/32", good, \$16.50, Colt .38 Super, excellent, \$25.00. Closeout Sale! Mossberg Rifles! J. Warshall & Sons, First & Madison-BB, Seattle, Wash. 4-38

BROWNING 12 ga. over-under, standard grade, new light weight skeet gun. 26 inch barrels. Perfect, \$55.00. Iver Johnson 20 ga. double. 26 inch barrels, skeet bored, Miller single selective trigger, automatic ejectors. Has been fired 96 times. Excellent, \$55.00. P. E. Hotchkiss, 905 W. Church, Champaign, Illinois. 4-38

NEW Factory Guns, Scopes, Accessories 10% off to members. Write for estimate on converting your Hornet rifle or actions to latest Donaldson .22-3000 or other latest calibers. Precision work guaranteed. J. R. Adriance, Owego, N. Y. 4-38

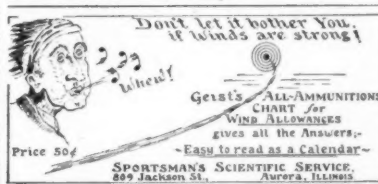


## INVALUABLE TO SPORTSMEN!

An intensely interesting and practical book based on Author's 30 years experience in the Canadian North and Frontier Country. Hundreds of photos of fish, game and outdoor life.

**Hunting & Fishing:** Where to go, how to get there, equipment, tackle, guns; advice on fishing, hunting, skinning, etc.  
**Canoe Routes & Camping:** First aid hints, equipment, routes, advice on camping, how to select guides, guides' duties, etc.  
**Transportation:** Auto, rail, airplane in Canada and Alaska.  
Practical advice on camera hunting. Every sportsman needs this book. Send \$1.00 to:

**CANADIAN-AMERICAN TRADING CO.**  
2334 Lincoln Ave., Chicago, Ill.







### For Rifleman Readers:

Thousands of RIFLEMAN readers use this Deluxe fabricoid binder to keep their magazines fresh, compact and always available. Its handsome covers are finished in rich maroon with figure and lettering stamped in gilt. You simply snap the magazines into position, one at a time—no cutting or punching is required. Save your copies of THE RIFLEMAN for future reference. Order a Deluxe binder today. The price?—only \$1.95, prepaid.

### For Target Shooters:

This new "3 in 1" score plug insures speedy, accurate target scoring. Equipped with .22, .38 and .45 caliber flanges on a single stem. It is the ideal all-purpose gauge and costs but \$1.50, postpaid.



### For N. R. A. Members:

Appropriate felt brassards (3 inches in diameter) are available for Life and Annual members. The illustration at left shows the annual brassard, about 1/3 actual size. Our Life Member brassard is a new, distinctive design in keeping with the Life Member 10-karat gold pin, which is illustrated actual size. All brassards are \$.50 each (specify membership status). Gold pins for Life Members only, cost \$2.50, postpaid.



**National Rifle Association** BARR BUILDING  
WASHINGTON, D. C.

**NO OTHER SCOPE** has ever won so rapid or so widespread acceptance among the shooters of America as has the Bausch & Lomb N.R.A. prismatic model Spotting Scope. Try this remarkable instrument yourself and see what a really fine scope can do for your scores. Literature on request. Bausch & Lomb, 741 Lomb Park, Rochester, N. Y.

*Shown, N.R.A. Scope, \$55.  
Tripod \$10.50 extra*

**BAUSCH & LOMB**

*spotting scopes*

.25, .270, .30 Caliber Gas Checks, \$1.10 per 1000 postpaid. R. W. Kampen, 557 Pearl Ave., Rockford, Illinois. 5-38

SEDGLEY 30-06, sling, Winchester 5A scope, Lyman tool, \$75.00. WANT—99T, .250-3000. William Badger, 16 Woodland Road, Maplewood, New Jersey. 4-38

PARKER 20 gauge Skeet, factory new condition, \$255.00 grade with A&F trunk. \$300.00 outfit. First M.O. \$145.00, prepaid. Geo. Brothers, Box 249, Pensacola, Fla. 4-38

SPRINGFIELD, 30-06, N.M., excellent, type C stock, fired 500 rounds, \$40.00. F.A. cases, fired once, clean, 50¢ per hundred. Carl Allen, 4006 N.E. 70 Ave., Portland, Oregon. 4-38

.30 CALIBER Luger Carbine, 12 inch barrel, forearm, detachable stock, very good, \$42.50. Karl J. Frisch, 320 Valencia St., San Francisco, Calif. 4-38

PERFECT Montague Redwing 9 ft. split bamboo dry fly trout rod, cost \$27.50, take \$19.50, or trade on 22 Colt or Smith Wesson revolver. George Misner, East McKeesport, Pa. 4-38

NEW DELUXE Custom Enfield, 30-06, beautiful (\$40.00) Myrtlewood stock, check-piece, fancy checkered pistol-grip, forearm; QD swivels, hooded ramp. With B&M Marksman scope, \$100.00; Without \$60.00. WANT—70. Paul Ratliff, Berrien Springs, Michigan. 4-38

30 CALIBER Eagle Luger, good, \$25.00. 30 Caliber 54 Winchester 30-06, 48 and 17A, good, \$32.50. 29S Weaver Scope, \$10.00. Set 7 wood shaft registered Spaldings, bag, \$27.50. Bun Special 21 Jewel, new condition, \$25.00. Glenn Henderson, Wellington, Kansas. 4-38

COLT 32 Automatic, blued, rubber grips, very good, \$15.00. Byron V. Hoover, Carlisle, Ind. 4-38

45 COLT Automatic former model, safety needs adjusting, rest good, \$10.00. Complete Target outfit Ranger 50 with 4 & 8X scope, very good, \$23.00. Ranger scope 4X, cost \$9.95, sell \$5.00, excellent. Lewis Watson, Box 776, Pocatello, Idaho. 4-38

38 SPECIAL Colt S.A. 5 1/4", good, \$20.00. 5A Winchester scope, mounts, \$22.00. 6.5 M/M Mannlicher Carbine, fine, \$50.00. 30-06 Springfield Sporter, fine, \$40.00. Ezra Carpenter, Court House, Malone, N. Y. 4-38

KRAG as issued, good or better, \$15.00. French made military rifle, Mannlicher model, in new and excellent condition, \$20.00. Carl M. Lewis, Oksaga, Kansas. 4-38

ROPER Repeating Rifle, good working order, grip cracked left side, make offer. Unaltered Russian, new, \$10.00. .45 Springfield, new, \$8.00. .52 Sharps Perc. Carbine, fine, \$7.50. 1864 Springfield Perc. Musket bored to 20 ga., \$5.00. 41 Swiss Rifle, good, \$6.00. U. Stevens .38 M. L. Rifle, fair, \$10.00. G. A. Nordheim .40 M. L. Rifle, new stock, fair, \$10.00. 50-70 Sharps Musket, fair, \$8.00. 1873 Winchester 32-20, new stock, bore poor, \$5.00. No trades. Lester Trenary, Erwin, S. D. 4-38

4 B&L PRISMATIC Spotting Scopes, brand new, 20% off, \$44.00 each. 4 B&L 7x35 Binoculars individual focus, brand new, 20% off, \$64.80 each. Remington Model 14, .35, 60 cartridges, excellent, \$40.00. Winchester Model 42 Skeet 410 Rib, beavertail, compensator, excellent, \$45.00. R. Dumont, 167 N. Martel Ave., Los Angeles, Calif. 4-38

.380 CALIBER Walther Police Pistol, "PPK" model, very good, \$26.00. F. Heysler, 6049 Roy St., Los Angeles, Calif. 4-38

MILLER'S Alteration of 1864 Springfield Musket to Breechloader, \$8.00. 11 M.M. Beaumont-Vitali Dutch Army, bayonet, \$4.00. L. E. Harthan, Ventura, Iowa. 4-38

REMINGTON 17, 28", modified, fired 9 times, perfect, \$25.00. Colt, 38-40, fair to good, best offer. Jack Higbee, Bloomfield, Iowa. 4-38

S&W, Triple Lock, 44 Special, Target sights, good, \$19.00. W. Phelps, Independence, Iowa. 4-38

FECKER 1 1/8", 10X, 1/4 minute click mounts, excellent, \$40.00. Stevens Favorite 25 R.F., fair, \$4.00. Univex 8 M.M. P-8 projector, \$11.00. B. Buckley, 221 Nicollet Ave., Mankato, Minn. 4-38

WEAVER 440-C, mount, never used, perfect, \$29.00. Winchester 53, 32-20, like new, select walnut, \$23.00. Winchester .401 selfloader, very good outside, excellent inside, Lyman 41 receiver, \$35.00. Krag, good, \$9.00. Burrell Hawver, Palatine Bridge, New York. 4-38

EXCELLENT D.C.M. Sporter, best offer over \$50.00. Heavy 52, very good, \$40.00. Standard 52, excellent, \$32.00. Stevens 418 1/2, 25 RF Weaver Scope, excellent, \$18.00. .38 S&W Hammerless, perfect, \$20.00. Goss rear for 52, excellent, \$7.00. Sam Ellis, Longview, Wash. 4-38



GENUINE Winchester B-5 Scopes only \$13.95.  
 Lyman New Alaskan Scope only \$40.50. Lyman  
 Jr. Targetspot \$40.50, Weaver 329 \$4.65, #29S  
 \$10.50, #330 \$24.75, #440 \$29.25. Free Catalog.  
 J. Warshall & Sons, First & Madison-BB,  
 Seattle, Wash. 4-38

LYMAN 438 Scope with mounts, \$12.50. 5A  
 click mount, \$3.50. Both \$15.00. First money  
 order takes. F. L. Moore, 818 Davis St., Evanston,  
 Ill. 4-38

WINCHESTER 52 Speedlock heavy barrel #25530  
 very good to excellent inside and out with brand  
 new Vaver front and MIELT rear sights \$47.00;  
 rifle without sights \$37.00; sights alone \$12.00. A.  
 S. Brewer, 1578 Dauphin St., Mobile, Ala. 4-38

NEW, factory grease never fired, Remington 30,  
 141A, \$44.50. Stevens Model 620, 16 ga. pump,  
 recoil pad, out in as new, fired less than fifty times,  
 stock and forearm shows some wear, \$20.00. Mar-  
 lin 32-20 excellent in, outside worn, \$12.00. Iver  
 Johnson 20 ga. single, full, perfect, \$4.00. Brand  
 new Winchester 37, 12 ga. full, \$7.00. Ansel Nel-  
 son, Kane, Pa. 4-38

.22-3000. Good M/54 Hornet now being re-  
 chambered for 2-R case, \$45.00. Heavy barrel  
 Winchester S.S. Zipper. Very accurate with  
 "Hot" loads, excellent, \$40.00. Colt Official  
 Police .38 Special 6". Audley spring holster,  
 all new, \$25.00. Stevens No. 52 (44½ action)  
 28-30. Scheutzen stock, triggers, palm rest.  
 100 cases, moulds, loading tools, Lyman 109 &  
 17A, blocks, excellent in, V.G. out, \$60.00. #4  
 Winchester S.S. 28" octagon 14" pitch Hornet,  
 or will rebarber for .22-3000. Scheutzen trig-  
 gers, spur guard. Modern Scheutzen stock of  
 beautiful Tiger Flame Maple. Adjustable butt-  
 plate, palm rest. Blocks. Chas. Johnson barrel.  
 Speed action. Excellent, \$75.00. Write for  
 particulars. Smith's Custom Loads, Middle-  
 bury, Vt. 4-38

REMODELED Enfield .30-06, very good condi-  
 tion, by Pacific. Full micrometer rear, military  
 front, sporting type stock, handloader ammunition,  
 \$25.00. Paul Sullivan, Washington, Ill. 4-38

COLT ACE, late model, factory condition, target  
 rear, fixed ramp front, \$35.00. C. F. Johnson,  
 Waverly, S. D. 4-38

COLLECTORS—S&W model 1902 hand ejector  
 3" barrel. Same with 6" target barrel. Both fine  
 condition. Best cash offer. Robert W. Knight,  
 Seneca Falls, N. Y. 5-38

SPECIAL SALE of new and used shotguns,  
 rifles and revolvers. Send for list. Stamp  
 please. Kimball Arms Company, 220 Cam-  
 bridge Road, Woburn, Mass. 4-38

WINCHESTER 405, beautifully stocked, fine,  
 \$35.00. Winchester S.S. 32-40, fine, \$25.00. Win-  
 chester S.S. Hornet, new #3 barrel, Vernier sights,  
 Winchester Scheutzen stock, engraved action, set  
 triggers, like new, \$75.00. Winchester S.S. action,  
 good, \$9.00. Winchester S.S. action, heat treated,  
 plated, fine, \$12.50. Winchester 25-20 S.S. Scheu-  
 tzen stock, Vernier sights, fine, \$30.00. 32-40 Schoyen  
 Ballard-Pacific, bore good, \$25.00. Ballard A-1, 38-  
 55 and 45-100 barrels, Vernier sights, engraved ac-  
 tion, fine, \$40.00. 8.15x46 m.m. Martini Scheutzen,  
 stock carved and checked, action completely en-  
 graved, Krupp barrel, like new, \$125.00. Remington  
 30, 30 caliber, fine, \$27.00. Remington 30,  
 25 Caliber, fine, \$27.00. Remington 25-20 slide  
 action fancy grade, \$30.00. Remington Hepburn,  
 38-55, nice stock, rough, \$6.00. Savage bolt 250-  
 3000, good, \$17.50. Sharps 45-100, good, \$15.00.  
 Whitworth 40 caliber military match rifle, oak  
 case with all accessories, like new, \$45.00. Cleves  
 Howel, 1040 Pennsylvania, Denver, Colo. 4-38

SPRINGFIELD Sporter, Scope blocks, \$25.00.  
 Enfield Sporter, Redfield sights, \$22.50. 24 inch  
 Krag, \$14.50. 22 L.R. Musket, \$9.50. Camp  
 Perry Colt, \$18.50. 57 Winchester L.R., \$14.50.  
 2 438 Lyman Scopes, micrometer mounts, \$14.50  
 each. 22 Niedner Magnum, shells and tools, \$28.50.  
 257 Mauser, \$27.50. All guns in good condition.  
 Details for stamp. H. B. Krohn, 1419 Sul Ross,  
 Houston, Texas. 4-38

O.M.T. .38-6" heavy barrel, latest model, excellent  
 to perfect. First M.O. \$27.00. K. S. Patterson,  
 R. #4, Lockport, N. Y. 4-38

FINE Kentucky Rifles rebored, shot guns,  
 pistols, revolvers, flasks, cheap. List for  
 stamp. Bert LeRoy Shaver, 127 Mathewson,  
 Wichita, Kansas. 4-38

SUPER Targetspot, perfect, \$55.00. Remington  
 Automatic 12. Poly Choke, very good, \$40.00. 5-A  
 Lyman, excellent, \$27.50. G. H. Wolf, Kewanee,  
 Illinois. 4-38

COLT .32-20 S.A., 7½", walnut grips, holster,  
 inside excellent, outside v.g., \$25.00. Winchester  
 32-20 M65, Lyman peep, inside excellent, outside  
 good, case, rod, 300 loads, \$35.00. Remington SS  
 pistol, .44 S&W Russian, inside v.g., outside fair,  
 \$15.00. Money orders or will ship C.O.D. H. B.  
 Forster, Tribune Tower, Oakland, Calif. 4-38

**LOOK!**  
 THIS RUST-PROOF SHEEPSKIN **\$2.25**  
 GUN CASE for only **POSTPAID**

GENUINE  
*Mid-Western*  
 QUALITY

Six months ago if someone had told us that we  
 would be offering a genuine Sheepskin Gun Case  
 for as low as \$2.25, we would have said it couldn't  
 be done! But fate has played into our hands—or  
 rather *your* hands. A well-known tanner made us  
 a "depression" price on a large quantity of sheep-  
 skin, provided we would buy up his entire stock in  
 order to clear his warehouse for other leathers com-  
 ing along. This being our slack season, we jumped  
 at the chance and ran these cases through with the  
 result that we are able to offer this high-grade case  
 IN 3 STANDARD sizes at the red-hot prices of  
 \$2.25, \$2.50 and \$2.75! These cases are made of  
 heavy sheepskin with wool side in to absorb mois-  
 ture, sweat, and dampness. The wool also collects  
 oil film which acts as an additional rust preventive.  
 Thick wool also protects sights, finish, and pads  
 gun against bumps. Gun slips in and out—one, two,  
 three. Stoutly reinforced with leather. Will out-  
 last gun. Ideal for storing gun. Here are the prices  
 from which you can order direct:

For guns with overall length of

No. 1319	42 to 44 inches	\$2.25
No. 1320	45 to 47 "	2.50
No. 1321	48 to 51 "	2.75

Made only in these 3 lengths—to fit SHOTGUNS  
 of all types and RIFLES with all types of action.

Note: If your gun is longer than 51", or if you  
 have telescope sight, we have sizes to fit. Tell  
 us what you have, and we'll send prices.

#### HOW TO ORDER

Measure the overall length of your gun from the toe of the stock  
 to the tip of the muzzle in a straight line. If the gun measures  
 from 42 up to 44 inches order #1319; if 45 to 47 inches order  
 #1320; if 48 to 51 order #1321. Attach money order or specify  
 C. O. D. Postage is prepaid on cash orders.

#### MONEY BACK GUARANTEE

If for any reason at all you are not 100% satisfied with the  
 case—or that you didn't get more than your money's worth—  
 shoot the case back and your money will be refunded with-  
 out the wink of an eyelash!

#### WHILE THEY LAST

But remember, we have only a limited supply of these cases  
 at these prices, and when they're gone—they'll be gone. So  
 measure your gun and send in your order TODAY.

**BERLIN GLOVE COMPANY**

603 Fox Avenue

Berlin, Wisconsin



**HOTEL CHELSEA**  
 FOR REST  
 OR PLEASURE  
 CHOOSE the CHELSEA

Here you will find everything to  
 further your comfort and enjoyment—  
 outside ocean - view rooms; veranda  
 for lounging; sun deck; superb cuisine;  
 alert, unobtrusive service; varied sports  
 entertainment, & fellow guests you'll like.

**SPECIAL  
 WEEKLY  
 RATES**

FROM  
**\$6 WITH MEALS  
 AND BATH  
 \$3 ROOM ONLY  
 AND BATH**  
 Per Person 2 in a Room

**ATLANTIC CITY**  
 JOEL HILLMAN • JULIAN A. HILLMAN  
 J. CHRISTIAN MYERS

**Give Your Guns  
 This Protection, NOW—  
 Use HOPPE'S**

USE Hoppe's No. 9 and  
 Hoppe's Patches for  
 quick, easy bore cleaning.  
 To remove leading, metal  
 fouling, firing residue—to  
 prevent rust and erosion.  
 Use Hoppe's Oil to save  
 wear and speed-up work-  
 ing parts—also to clean  
 and polish. At your deal-  
 er's. Samples: For No. 9  
 send 10¢, Oil 15¢, Patches  
 25¢—give bore size. Send  
 for Frank Hoppe's Gun  
 Cleaning Guide—FREE.

**FRANK A. HOPPE, Inc.**  
 2321 N. 8th St., Phila., Pa.



## Kill Tough Big Game at Long Ranges

.300 H. & H. or .375 H. & H. Magnum

Shown here: Restocked M70  
Win. with Lyman Alaskan  
scope on G. & H. mount.

### Get Yourself

### a GRIFFIN & HOWE Magnum Rifle

Stop any Alaskan brown bear or grizzly, any bull moose, in his tracks at long range, with a Griffin & Howe .300 H. & H. or .375 H. & H. Magnum. Far and away more sustained energy than the most powerful .30/06. As for accuracy, Griffin & Howe .300 Magnum target rifles have won first and second places in recent big-bore National matches... M70 Winchester, Mauser, or standard 30S Remington (M17 Enfield) action. Rebarreling where necessary, including rechambering and adapting bolt and magazine for handling cartridges of your selec-

tion. Restocking in our sporting style, imported walnut, as shown above. Sight equipment as you order. We are now supplying the new Lyman Alaskan 'scope on our new ultra-low, quick-detachable mount made specially for it. . . . Get one of these Griffin & Howe Magnum rifles—practically a custom-built rifle at much less cost. Write TODAY to

GRIFFIN & HOWE, INC.

Makers of Fine Rifles

202-R East 44th St., New York, N. Y.

## 10-X Presents TWO NEW MODEL SHOOTING COATS for 1938

### 2 NEW RIFLEMAN'S COATS 2 NEW TRAP JACKETS

Rifleman's gloves, gun cases,  
shooting pants

Write for Free 1938 catalog

10-X MFG. CO.  
Des Moines, Iowa

In Canada write  
Watson Gun Sight Co.,  
111 Adelaide Street, W.,  
Toronto, 2.



See local dealer or write for Free catalog

10-X Manufacturing Co.  
Des Moines,  
Iowa

### NEW RECORD

for Indoor 100 yd. IRON SIGHT match. Mr. J. R. Wark fired 600-38X at the Buffalo Matches January 22-23. His score for five matches was 110-81X. Mr. Wark tells us he used the MERIT IRIS SHUTTER FRONT SIGHT and MERIT IRIS SHUTTER PEEP SIGHT DISC and that they played no small part in helping him shoot these record breaking scores.

### ANNOUNCING

To the hundreds of shooters who requested them, The NEW MERIT IRIS SHUTTER DISC for Lyman, Redfield and Vaver globe front sights are now ready. These discs are adjustable by clicks so the shooter can set his sights to outline the target at any range before he lays down to shoot. Price \$3.00 prepaid.

The only instantly adjustable and absolutely accurate peep sight disc. Simply open or close the Iris Shutter for the desired aperture. Target or Hunting discs. \$2.50 Prepaid. State make and model of sight and rifle when ordering.



See W. F. Roper's article in February Rifleman, page 16. He tells why a device of this type is indispensable to pistol shooters. MERIT PRODUCTS have been fully tested and approved by all leading shooting authorities. Order them through your dealer or direct. Cash or R. D. CIRCLE & FIVE.

MERIT GUN SIGHT CO., DEPT. A.

1638 Jaynes Street Berkeley, Calif.

### END RUST WORRIES

Without Injurious  
Scrubbing

Complete protection even in moist tropical climates and salt sea air. RIG eliminates immediate cleaning. The RIG stops rust when others fail. Test regularly by F. C. Ness, H. H. Goode, J. C. Crossman, F. A. Smith, P. Sharpe, C. S. Lewis, E. J. Wilson. Furnished free.

Always RIG your rifles, pistols, and shotguns inside and out after shooting. RIG stops rust when others fail. Test regularly by F. C. Ness, H. H. Goode, J. C. Crossman, F. A. Smith, P. Sharpe, C. S. Lewis, E. J. Wilson. Furnished free.

**RIG**  
FREE FOLDER



### TRUE-VISION TARGETS

SPECIAL for Pistol. Has a true aiming post to center. Relieves eye-strain and no fading. Price, \$1.00 for 50; \$2.00 per 100. Post-paid.

Dealers write for prices.

THE V. H. CO.  
Box 202 Yonkers, N. Y.

DELUXE Springfield 30-06 Sporter, beautiful circus stock, cheek-piece, Buffalo horn fore-end tip, checked, ramp front, 48 rear, G&H double lever mount carrying Hensoldt Ziel-Dialyt 234X; condition as new. Cost \$250.00; sell \$125.00. Dr. Geo. Fielding, Glens Falls, N. Y. 4-38

BALLARD .22 Hornet match rifle, heavy barrel chambered by Charles Johnson, scope blocks. Very good condition. \$30.00. E. S. Augsburg, 1124 Hazel Avenue, Lima, Ohio.

L. C. SMITH "Specialty" single trap gun with Elliott solid sole leather case, fired less than 500 times, \$100.00. Smith #3E, 12-32 full, barrels and action like new, \$50.00. Ithaca "Victory" single trap, tight and good, \$40.00. Krag sporter, ramp front, double set triggers, never fired, \$30.00. H. A. Haskell, Brattleboro, Vt. 4-38

PARKER double D.H.E., perfect, 30 modified, full, laced recoil pad, leather case, \$145.00. C. R. Nichols, R. #1, Avon Lake, Ohio. 4-38

STEVENS Walnut Hill heavy barrel target rifle, Lyman 52 extension rear and 17-A front. Sling and fleece lined case included. Excellent condition. \$40.00. John M. Keenan, 265 Hathaway Lane, Wynnewood, Penna. 4-38

M54 30-30 new. H.B. 52 high stock, Goss sight, excellent. .38 Colt. S&W 1917. 9 M.M. Luger. 1500 new Krag ammunition. Copies Arms & Man. Stamps please. W. Happe, Ramsey, N. J. 4-38

25-35 SEDGLEY KRAG, scope blocks, Springfield front, aperture rear, fine stock, empty cases, very good, \$35.00. 32 Long Rim Fire, Hopkins & Allen, fair, \$6.00. .219 Zipper Krag, repeater, 26" Savage barrel, empty cases, fine stock, excellent. \$45.00. 140, 38 Special cases, good, \$1.40. Vernor Gipson, 1934 Touhy Ave., Chicago, Ill. 4-38

EXCELLENT 52, 17A front, brand new Lyman extension rear, \$35.00. Edw. Hall, Tenafla, N. J. 4-38

DELUXE Star Gauged Springfield Sporter, perfect, extras, beautiful job. \$60.00. DeLuxo, Winchester 12-12-30 full, excellent, beautiful job. \$60.00. 35 Remington Automatic, good, \$35.00. WANT—Howe's Gunsmith. Walter Beilstein, 16 Bennett, Pontiac, Mich. 4-38

TWO 1 1/2 Feckers, 10 and 12 1/2 X, excellent, \$50.00 each. V. P. Dorrance, 10 Canton St., Warren, Penna. 4-38

COLLECTORS: Colts, Navy .36 percussion, works good, finish worn, \$5.50; another, better, \$6.00. .31 percussion, 4" barrel, finish bright, shooting order, \$6.00. Sharps 4 barrel .22, good, \$4.50. Defender '89 .32 rim, very good, re-nickled, \$3.50. Iver Johnson .38, 2" barrel, nickel, good out, very good in, \$4.50. Sharps Carbine, finish worn, otherwise good, \$5.00. Peabody-Martini .44 rifle, target sights, nice checked stock, good, \$13.50. R. O. Huddleston, Linwood, Mass. 4-38

REMINGTON Sportsman twenty "Skeet grade", excellent, \$38.50. Savage 23AA with Ranger 4X scope, very good to excellent, \$19.00. Iver Johnson Skeeter, 12-28, ejectors, selected stock, straight grip, factory, \$39.00. Ranger heavy target, extremely accurate, palm rest, etc., \$14.50. Agassiz timer, cheap case, \$30.00. Frederick Bird, Tolono, Ill. 4-38

TELL PISTOL, outside excellent, inside perfect, \$35.00. E. H. Harrison, Aberdeen Proving Ground, Md. 4-38

PETERSON-BALLARD .32-40, double set trigger, 1234 lbs., excellent inside, tang peep, tool and mould, \$35.00. Several Muzzle loading rifles, \$5.00 and up. C. C. Carpenter, 1500 Cochran Road, Lexington, Ky. 4-38

WINCHESTER 54 Hornet, French walnut stock with high comb, cheekpiece, quick detachable swivels. Scope blocks, no rear sight. Some bluing off floor-plate, rest excellent. Very accurate. \$35.00. W. L. Humphrey, Round Hill, Virginia. 4-38

N.R.A. National Match Springfield, service sights, receiver drilled for Lyman 48, bore very good, stock same. Very accurate. \$45.00. Archie J. Bell, Worland, Wyo. 4-38

B&L DRAW TUBE, Badger stand, excellent, \$22.50. Stevens Offhand Pistol, case, good, \$7.50. Charles Black, 2619 N. 6th St., Harrisburg, Pa. 4-38

1 1/4" FECKER Scope, 6X, 1/4 minute clicks, excellent. \$45.00. R. F. Engle, 613 University Ave., Syracuse, N. Y. 4-38

WINCHESTER Special Trap, 12-12-30, full, engraved, excellent, cost \$175.00, \$75.00. Pigeon Grade Smith ejector, 12-30 full, good, \$40.00. Remington 11-20-28 full, very good, \$30.00. Winchester 12-16-28 modified, very good, \$25.00. 11 M.M. Eagle Luger 6 inch, good, new barrel, \$22.50. K-22, excellent, \$25.00. Winchester 63, new, \$20.00. S&W 38-44, 6 1/2", engraved, very good, \$30.00. No trades. Dr. P. V. Humphries, Box 822, Seminole, Okla. 4-38

WINCHESTER 52 Standard Speedlock, 48J and Wittek front, Unertl Grip, sling, condition very good, \$35.00. Ward F. Snow, Blue Hill, Maine. 4-38

COLTS: 32-20 Army Special, V.G., \$12.00; 38 Double action, chrome plated, \$10.00; 380 Auto, chrome finish, special grips, \$13.00; 45 1917 with 7 1/2" barrel, excellent, \$16.00. Smith & Wessons: 32 Hand ejector, \$10.00; 44 S&W American, 8" barrel, single action (see page 9 November 1936 RIFLEMAN), \$10.00. Joseph Temple, 1409 Chalmers, Detroit, Michigan. 4-38

1933 SAVAGE, 330 Weaver, both very good, \$20.00 each. 16 gauge Western Double, Auto Ejectors, good, \$22.50. W. Koch, 1324 A Hawthorne Place, Richmond Heights, Mo. 4-38

LUGER Model 1912 9 M.M. 4 inch, \$24.50. Camp Perry Pistol, 8 inch, \$27.50. Colt New Service, 45 caliber 5 1/2 inch, \$24.50. Colt Model 1917 caliber .45, automatic cartridges, \$24.50. Colt Automatic, military, 38 caliber, 6 inch, \$17.50. All excellent. Winchester 45-70 lightweight, take-down, \$27.50. Winchester 32-40, take-down, \$24.50; all very good. Browning S.P., 401 Winchester Self-Loading S. P., 35 Winchester S. P., 11 M.M. Mauser. We want good used Rifles, Guns, Revolvers, Cameras, Binoculars. Will pay cash or exchange. We have no printed lists. M. & H. Sporting Goods Co., 512 Market Street, Philadelphia, Pa. 4-38



**SHOOTING and Fishing supplies.** 10-X Imperial Rifleman's coats, \$9.00, prepaid. Super Targetspot, new, never out of factory box, \$63.00, prepaid. B&L Prismatics, any power, \$49.50, prepaid. Buckeye Tube Sights, Delaware, Ohio. 4-38

**SAVAGE 99A Cal.** 303 Solid Frame, good, \$20.00. Barrel only Standard Winchester 52, 17A, excellent, \$8.50. Fred Keller, Albany, Indiana. 4-38

**417-2 EXCELLENT,** \$32.00. W90, 22 W.R.F., excellent, \$14.00. 23A, very good, \$11.00. **WANT** —Kar. 88. Norman C. Dutt, St. Joseph, Michigan. 4-38

**BARGAIN:** Muzzle-loader, 35", 38 cal., lapped, blued barrel; Tryon-Merrick bar lock; new tiger-maple stock, \$15.00. Springfield 45-70, nearly perfect, \$7.50. Recent M-1 ammunition, 300 rounds, \$10.00. 600 empties, 38 Special, fired once, \$5.00. 100, 8 M.M. empties, fired once, \$2.00. J. H. Kelley, Jr., 450 1/2 E. Commercial, Springfield, Missouri. 4-38

**TARGET Woodsman,** 45 engraved National Match, 38-44 Outdoorsman, all very good. Fitted Kit Cabinet. Best bid. Photos stamped envelope. Ed Ritter, 601 Chapel, Schenectady, N. Y. 4-38

**NEW N.R.A. rules permit "LESS PROFANITY" Sling Keepers.** They cause no delay on the firing line. Bronze 40¢, polished bronze 60¢, German Silver \$1.00. W. A. Study, R.R. 23, Box 348, Richmond, Indiana. 4-38

**31-S REMINGTON** trap ventilated rib, excellent, \$60.00. Model 21 Winchester with two sets of barrels, skeet and trap, single select trigger, narrow and wide forearms. Cost \$170.00 new. Inside excellent, outside good. Sell \$75.00 cash or trade on model 37 Remington and targetspot or Model 52 heavy and targetspot. Lawrence Humble, Hamilton, Mont. 4-38

**BROWNING Over-Under, Trap Model,** hand engraved, ventilated rib, 12 gauge, 30" barrels, full and improved modified, Bradley ivory front and middle sights, Pachmayr recoil absorber, excellent, \$65.00. 30-06 Springfield Service, Star Gauged barrel, sight covers, sling, good, \$25.00. 500 1933 30-06 boattail cartridges, \$15.00 or \$3.00 hundred. 100 1934 30-06 boattails, \$4.00. 300 Western International Match 30-06 cartridges, hand loaded by Western, \$15.00 or \$5.00 hundred. 100 Remington 110 grain Hi-Speed 30-06 mushroom, \$5.00. 200 50 caliber Remington Pistol cartridges, \$4.00. Money orders, please. G. A. Lafleur, Madison, Nebraska. 4-38

**10-X ARISTOCRAT** Coats \$5.75, slightly shopsoiled. Zeppelin Arms, Akron, Ohio. 4-38

**BROWNING Over Under Lightning 28"** Improved cylinder and modified, recoil pad, excellent, \$55.00. H&R Sportsman single action, excellent, \$14.00. W. K. Amery, Big Timber, Mont. 4-38

**POLK Folding Rifle Rest,** 60 cents postpaid, no stamps please. J. L. Polk, 3 Lakewood Place, Troy, N. Y. 4-38

**D.C.M. SPRINGFIELD Sporter,** perfect in, excellent out, \$45.00. Savage 99 S-F 30-30, perfect in, excellent outside, \$24.00. **WANT**—Perfect Woodsman 4 1/2". Donald Ackerson, Princeton, Ill. 4-38

**16 GAUGE Remington Sportsman Auto,** Skeet grade 26 inch ventilated rib barrel, skeet bored, recoil pad and sole leather case, excellent condition, \$60.00. E. W. Harris, 812 Taylor St., N.E., Washington, D. C. 4-38

**HIGH GRADE ten gauge hammer double,** \$12.50. Hammerless twelve double, \$12.00. Hollenbeck twelve double, \$17.50. Springfield, \$23.50. Krag, \$12.50. Savage 22 target, \$15.00. Winchester Automatic twelve, \$19.50. Winchester 22 Pumps, \$5.00 and \$8.50. Winchester 44-40 1873, \$9.50. Colt lever 44, \$30.00. Martini 22 target, \$35.00. 9 m.m. 8" Luger, \$21.50. 30 33 1/2" Luger, \$15.50. Details on request for stamp. **WANT**—Double rifles any caliber or combination guns cheap for cash. Irving Auto Company, Biddleford, Maine. 4-38

**D.W.M. LUGER,** 30, 4 1/2" barrel, \$21.50. 45 Gov't. Auto, \$11.00. 32 Origie Auto, \$6.00. Above guns fine mechanically, but bores slightly rough. Like new: Woodsman 6 1/2", Hi-Speed, \$24.00. F.S. 32 Revolver, \$6.00. K. Booth, 317 N. Jerome St., Allentown, Pa. 4-38

**CONSIDERABLE** proportion of the collection of 50 different S&W's and early Colt automatics advertised in March RIFLEMAN still unsold. Also 100 others. List 5¢. Calvin Goddard, 3533 Quebec, Washington, D. C. 4-38

**FLINT LOCK,** percussion, cartridge pistols and revolvers; also lot of shot and powder flasks. List. Stamp please. Krider's Old Gun Store, Established 1826, L. C. Siner Co., 2nd & Walnut Sts., Philadelphia, Pa. 4-38

**TWO custom made rifles,** 30-06 and 257. Excellent condition and priced low. F. P. Wilson, Roxbury, New York. 4-38

# The Sensational New M-G BIG BORE SLEEVE SIGHT



Now ready for Springfield 30-06; Krag; Winchester 54 and 70. . . . Price \$15. Also Rec. Ext. Sight for Remington 30S and Enfield. . . . Price \$12.

*Puts the Aperture Closer to the Eye!*

**REDUCES DANGER OF EYE INJURY FROM RECOIL!**

## The Marble-Goss Receiver Tang Sight

Adjustable eye relief, 3 positions. Provides perfect fit, high or low comb stocks.



For Winchester 52, 56, 57, 69, and Ballard; Savage 19, 22, 23, and 33. Also Stevens 417, 416-1; Ranger 50; Remington M-37. . . . Price \$12 For Springfield M-1 and M-2; Remington 34 and Winchester Single Shot Rifles, including B. S. A. \$1.50 additional.

At last, a really fine sight for military, sporting, and "bull" guns that puts the aperture where it belongs . . . close to the eye! Holds sight disc 2 1/4" nearer the eye than the usual type of receiver sight, yet does not extend back of cocking piece. Reduces danger of cocking piece striking eye during firing. Equipped with quick-removable staff, reversible disc carriage, and left-side precision micrometer adjustments, the new M-G Sleeve Sight gives a rigid-based, accurately adjustable sight with correct eye relief. ALL models easily attached without drilling, tapping, or cutting away of stock. It's the Big Bore Sight that has everything! Correctly-designed . . . well-built . . . rigidly tested . . . priced right.

## Well Known Legion Team Shooter Says:

"Three years ago my Big Bore scores began to slip because of astigmatism. Mr. Goss put one of his Sleeve Sights on my Springfield. Immediately my scores began to climb and I held my place on the team. Another member on the verge of retiring because of poor eyesight, discovered that he could still turn in a swell score with the M-G Sleeve Sight." (Name on request.)

Boost your score with the New M-G Sleeve Sight . . . the sight that has everything!

Write today for descriptive folder

**MARBLE ARMS & MFG. CO.**  
502 DELTA AVE. GLADSTONE, MICH.



## \$3.50—IMPROVED TRIPOD

Micrometer Elevation, Offset Saddle, (not illustrated) Cast Aluminum. Satin Finish. Height, 10" to 15". With extension adjustable to 25", only \$4.25, 2 oz. Gun Oil, Sperm Oil, Powder Solvent or Raw Linseed Oil, only 35¢. Stock Polish 50¢. Bluing Solution, 4 oz., 75¢. Gun Grease, 50¢. Free Circulars.

THE JAYMAC CO., Jackson, Mich.

**WINCHESTER A5,** optically perfect, blue worn, \$20.00. H&R "Expert", bore perfect, \$10.00. Will trade. **WANT**—12 gauge O&U, 32-40 Winchester, 341 Remington Sportmaster, V.G. or better. F. C. Culler, Alliance, Ohio. 4-38

**WINCHESTER 70-06,** Lyman's, new, \$47.50. Deluxe (Linden) Enfield Sporter, best offer. Colt's O.M.T. 38-7 1/2, perfect in, \$22.50. Colt's Frontier, 32-20 7 1/2, ivory grips, excellent in, \$17.50. H&R DA 38-S, new, \$8.50. Stevens, 20-26, pad, excellent, \$12.50. H. K. Hilner, Meyersdale, Pa. 4-38

**MAUSER 220 Swift 3/4 Sedgley barrel** inside excellent stock good no sights very accurate. \$30.00. 4X Noske #B, optically perfect, \$22.00. Jule Hoyer, Box 66, Lewistown, Penna. 4-38

**ZEISS Delattem Binoculars 8x40,** excellent, \$50.00. 220 Swift Niedner Mauser D.S. triggers extremely accurate outfit, nearly new. 700 22 cal. bullets, \$5.00. Fairbanks scale, \$13.50. Primer pocket reamer new, \$3.00. Assorted primers, powder and bullets. D. Biggs, 6346 Drexel Ave., Chicago, Ill. 4-38

**K-22, shoulder holster,** Pachmayr adapter, excellent, \$26.50. Winchester M-12, 12, 26", Poly-choked, very good, \$35.00. Guaranteed bargains. Arvid Hamrick, 409 Washington, Kewanee, Illinois. 4-38

**22-32 S&W 6" barrel,** Patridge sights with Heiser lined full Mexican holster, excellent, \$28.00. W. B. Lang, Carlsbad, N. Mex. 4-38

**THE KENTUCKY RIFLE,** Dillin. The book can be had direct from the Author. Price \$6.00. Autographed if desired. J. G. W. Dillin, Media, Penna. 4-38

# USE YALE OIL ON YOUR GUNS



Here is the ideal oil to protect your prized rifles, pistols and shotguns—to help keep them in good working order, free from rust. YALE OIL, made by YALE, maker of famous locking devices, is used to lubricate and rustproof the world's finest bank vault mechanisms. It is a special formula oil with remarkable affinity for metal. Its stronger film resists "air punctures," gives longer protection. Insist upon YALE OIL.

In handy tubes, 10c, 15c and 25c. At hardware and sporting goods stores.

If your dealer can't supply you, send 10c and we will mail a tube postpaid.

Address Department O.R.

**THE YALE & TOWNE MFG. CO.**  
STAMFORD CONN.

**EXCLUSIVE with STOEGER**

**Ajack**  
RIFLE TELESCOPES

Available for the first time since 1914. The world-renowned German-made Ajack Hunting and Target Scopes give you, by far, the largest field of view. Brilliant images assured. No color distortion. Very rugged. Modestly priced. Send for Free Pamphlet.

**STOEGER ARMS CORP.** 507 Fifth Ave., N. Y. C.





## NEW Catalog-Hand Book (No. 17)

You should have this new Catalog-Hand Book so you can keep up-to-date in the shooting game. It contains all the latest information and illustrations on Reloading, Remodeling, Resighting, Scopes and the very latest and best in Accessories. A most interesting and valuable reference book which every shooter should have.

Send 20c for this fine new Catalog-Hand Book. The 20c partially covers the cost of publishing and mailing—the 20c will be refunded on your first order. Requests from Canada, send 25c.

**PACIFIC GUN SIGHT CO.**  
353 Hayes St., San Francisco, Calif.



*Proved by the great majority of shooters from coast to coast.*

## LYMAN SIGHTS

are made with extraordinary precision and care by sight experts. Use them to demonstrate the last degree of accuracy possible from your rifle and ammunition. Full details available on sight questions; your inquiries welcomed.

## TARGET CLICK SIGHTS



No. 48 Click sight permits fine adjustment to center on bullseye. ¼ min. clicks. \$18.00, complete.



Brings sight close to eye. Adjustable forward and rearward. ¼ min. clicks. Win. 52. Stevens Walnut Hill. \$13.00.

## TARGET FRONT SIGHTS



No. 17 Hooded Target Front Sight with none interchangeable inserts. 64 pp. Catalog, 10c. Free folder.

**LYMAN GUN SIGHT CORP.**

90 West St. Middlefield, Conn.

New No. 17 mounts approx. same height as scope. 9 inserts, \$4.00.



## ANNOUNCING

A new Shooting Jacket with built in arm cuff. A new Tripod Scope Stand with micrometer elevation adjustment and an off-set feature not found in any other stand.

Send for descriptive circular—ready for delivery NOW.

**BADGER SHOOTERS SUPPLY**  
OWEN, WIS.

**BLUEING**  
**REVOLUTIONIZED**  
**STOEGER'S BLACK DIAMOND**  
**Lightning BLUER**  
A Faster, Better Blue, amazingly inexpensive  
Write for complete details and prices  
**STOEGER ARMS CORP.**  
307 South Ave., Box 224, New York, N. Y.

## ALL PURPOSE MOTO-TOOL



ONLY \$985

SENT POST PAID

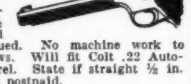
**10 DAY MONEY BACK TRIAL**  
Everybody who works with his hands—at home, shop, school, or profession—can use the efficient, attractive Moto-Tool to advantage. With this practical machine you can do in seconds jobs that require hours of hard hand work. Moto-Tool handles hair-line precision jobs or does power work with equal ability. Flips in size AC or DC socket. Absolutely safe. Hundreds in use. Two line models to choose from. No. 1 a sturdy 6 oz. machine—25,000 r.p.m. for light bench work. No. 2 a heavier, more powerful tool—18oz. 27,000 r.p.m.—with extra mechanical features every craftsman will appreciate. Price, \$18.50, postpaid.  
Order on 10-day trial. Money refunded if not more than satisfied. Send for FREE booklet, 20 pc. craftsman's tool set for all types of Moto-Tool work, \$5.75, postpaid.

DREMEL MFG. CO., 2128 CT., Racine, Wis.

## Steadies Your Hand—Reduces Strain in Aiming

Greater accuracy from improved balance by a 3½ oz. weight (approx.) Steel accurately machined, blued. No machine work to attach, just tighten screws. Will fit Colt .22 Automatic Pistol 6½ in. barrel. State if straight ½ in. or tapered barrel. \$2.30 postpaid.

## Steady Your Aim!



## STEDIMOR BALANCER

Box 605 Rockford, Illinois

220 SWIFT Model 70 Target Grade, cost \$103.50, fired twenty rounds, excellent, sell \$69.50. 7 M.M. imported DWM cartridges, soft point, \$1.50 box. H. A. Newby, 512 Freeman, Kansas City, Kansas. 4-38

H&R SPORTSMAN. Very good. Lawrence holster, extra grip. Outfit \$17.50. Revolver \$15.00. Swap accurate Benjamin for Stevens tip-up or \$4.00. Paul St. Gaudens, 1225 N. Greenway Drive, Coral Gables, Fla. 4-38

COLT Frontier 45 Presentation, Nickel, marked U.S. Good. \$25.00. North 1819. Very good. Bright finish. Original \$35.00. Swords; Waters, F.L. Musket, \$20.00. Dr. Frank E. Rowe, Revere, Mass. 4-38

22 REMINGTON Automatic, good, \$18.00. Winchester 1873 new barrel 32-20, \$15.00. 16 Gauge double hammer gun, fair, \$8.00. Two mounted Elk teeth, \$40.00. Whitcomb Gun Shop, Albany, Wis. 4-38

S&W Military Police .38 Target current model, excellent, \$25.00. J. R. Callum, 215 Colley Ave., Norfolk, Va. 4-38

PERFECT S&W 44 Special, \$28.00. Good Straightline, \$20.00. Good 25-20 SS DS Winchester, \$25.00. John Pohlod, 9624 Silk Ave., Cleveland, Ohio. 4-38

MAUSERS, Gew 98, Waffenfabrik 8 M.M., \$5.50, \$9.50, \$18.00. Excellent Mauser Sporters, \$20.00 and \$25.00. Receivers \$10.00. Parts. M. J. Albert, Cedar Falls, Iowa. 4-38

.380 COLT Auto, excellent, \$12.50. .32, good, \$8.50. .32 S&W Hammerless, pearl V. G., \$10.00. .38 P.P.S. 4" Nic., V. G., \$11.50. .38 Special M&P, 4", blued, excellent, holster, \$18.00. G. Boser, Springville, N. Y. 4-38

CHECKERING TOOLS, \$1.00 set. Mauser actions, excellent, \$12.00. Let me build that super accurate Vermin Rifle. Lowest prices on new Guns, Scopes, Reloading Tools, 10-X Coats, Re-barreling and Re-Modeling. Leonard Aurand, 340 Logan, Lewistown, Penna. 4-38

WINCHESTER M63, 23", very good, \$21.00. Woodsman, 6½" H.S. \$20.00 Holster. 1903 Military Ross with bayonet, \$15.00. Luger holster, cased pair of clips, \$5.00. Greener 10 fair Damascus double \$25.00. Art Anderson, Lawrence, Kans. 4-38

COLT Ace, \$30.00. Smith and Wesson 44 Special heavy duty 5 inch blue, \$27.50. Both new condition. Dan Ashbacher, Coffeyville, Kansas. 4-38

LEFEVER Trap Double ventilated rib 12-32, V.G., \$30.00. Savage 99 action and fore-end good, \$5.00. Smith and Wesson Military 44 Special perfect, \$25.00. Mauser Vest Pocket 25 Automatic, good, \$9.00. R. V. Alquist, Clay Center, Kansas. 4-38

PAIR Officers Flintlock Pistols, cased, accessories. Excellent. \$65.00. William Hake, 17 Forest Lane, Scarsdale, N. Y. 4-38

WINCHESTER Heavy S.S. 45 Express, \$15.00. Winchester 32-40 H.S. action only 2 screws missing, curved tang, \$7.50. Remington Hepburn, \$10.00. Mauser Kar. 98 no stock, \$11.50. All above good plus. Service Rifle Rock Island #282675, very good, stock poor, \$13.50. C. A. Hardy, 6637 Marquette Ave., St. Louis, Mo. 4-38

OFFICERS Model 38 Special heavy barrel, perfect, \$29.00. M1917, 30-06 cal. Enfield, 22" barrel, remodeled sporter, P.G., fine oil finish, Springfield front sight, Pacific micrometer rear, recoil pad, excellent, \$25.00. S&W M1917 45, pearl grips, excellent, \$17.00. Heiser holster, \$2.00. J. Duffy, 5406 13th St., N.W., Washington, D. C. 4-38

WINCHESTER SS, Hi-Wall, 32-40, #4 barrel, single set, 6X Cummins Scope, excellent. Winchester M70 Swift, perfect. Winchester Musket, Lyman rear, fair, \$7.00. Benjamin .177 pistol, perfect, \$5.00. Standard 52 barrel, excellent in, very good out, \$7.00. WANT—52 H.B., Springfield M2, B&L Prismatic. Stamp please. Vic Breneman, Hershey, Pa. 4-38

BARGAINS: Neptune Motors, all sizes. Hood Hi-Top Flexiboots, \$5.50. Hettrick tents and camping equipment. Flaig Brothers, 817 East Ohio St., N. S. Pittsburgh, Pa. 4-38

COLT Gov't. Automatic, excellent. Luger 9 M.M., good, \$16.00 each. WANT—Revolvers, Pistols, War Relics. Jack Walton, P.O. Box 1457, Tampa, Fla. 4-38

MODEL 70, Roberts, target weight barrel, blocks, extremely accurate, 180 cases, perfect, \$60.00. Latest 37 Remington Rangelmaster, perfect, \$52.00. 1892 Winchester, .25-20, octagon barrel, factory grease, \$27.50. Springfield Service, as issued, \$17.50. 10X Targetspot, excellent, \$40.00. 8X Malcolm, ¼ minute, Lyman, excellent, \$17.00. B&L EE Binoculars, 6x30, very good, \$15.00. Krag actions, \$6.00. John Bartlett, 36 Fairfax Court, Huntington, W. Va. 4-38

ZEISS 8x30, \$40.00. Goerz 12x25, \$38.00. B&L 6x30, \$23.00. 10x50, \$46.00. Others cheap. 40X Spotting Scope, \$22.00. Lyman #438, mounts, \$12.00. Winchester A-5, mounts, \$20.00. 30-06 Mauser and Springfield 4 Sporters, \$32.00. Hornet Krag Sporter, \$28.00. Krag 22 Niedner Magnum, including dies, \$34.00. Winchester SS Lovell, Sukalle match barrel, including dies, \$40.00. Fine Hepburn Lovell, fancy stock, \$45.00. Hornet SS Winchester, \$20.00. 45-70 Borchardt, \$18.00. Springfield as issued, \$21.00. 32 Colt Auto, \$12.00. 38 and 45 Auto, \$19.00. M1917, \$14.00. 32 Savage Auto, \$9.00. 35 S&W Auto, \$13.00. M&P 35 Special, \$18.00. 9 M.M. Mauser pistol, \$30.00. 38 M&H, \$12.00. 38 Lightning, \$12.00. Bargain list stamp. John Smith, #7 Rambler Ave., Runnemed, N. J. 4-38

PACIFIC Ballard Action, very good, \$15.00. Five M1 Magazines and Bolt. D. H. Reher, Grand Ave., Aliquippa, Pa. 4-38

SPRINGFIELD bull gun #1,257,775, Winchester 30 inch heavy snipers barrel, perfect, fired 350 rounds, Lyman 48, 17, Scope blocks, cheek pad, very accurate, \$65.00. Five Cuts Compensator tubes 12 gauge, Spreader, General purpose. Long Ranges, #1, #2, #3, perfect, \$10.00. WANTED—Perfect B&L prismatic spotting scope. Paul Murphy, Hanford, California. 4-38

COLT WOODSMAN \$3.25 down and \$3.71 monthly for eight months. 1938 Catalog dime. Zeppelin Arms, Akron, Ohio. 4-38

.250 SAVAGE '99G, peep, V.G., \$30.00. Zeiss Maximar 2¼" x 3¼", 1.4.5 Compound, filter, leather case, tripod, Zeiss meter, perfect, \$50.00. 52 Winchester, 48J, 17A, good, \$25.00. '92 Winchester, 44 rifle, T.D. V.G., \$17.00. 22 WRF, heavy SS, T.D., low wall, V.G., peep, \$8.00. Ross .303 Model 1905, good, \$5.00. A. Cicatella, 45 Montauk Ave., Merrick, L. I., N. Y. 4-38



Mauser  
id that  
ices on  
Coats,  
Aurand,  
4-38

\$21.00.  
S. Milli-  
holster,  
Damas-  
n, Kans.  
4-38

Special  
y condi-  
4-38

12-32,  
id good,  
ial per-  
omatic,  
Kansas.  
4-38

essories.  
st Lane,  
4-38

\$15.00.  
missing,  
10.00.  
ve good  
5, very  
37 Mar-  
4-38

rel, per-  
barrel,  
ringfield  
pad, ex-  
tips, ex-  
Duffy,  
4-38

barrel,  
Winches-  
Lyman  
perfect,  
ry good  
12, B&L  
Hershey,  
4-38

sizes.  
cks tents  
ers, 817  
4-38

uger 9  
Pis-  
4-38

blocks,  
\$60.00.  
\$52.00.  
factory  
\$17.50.  
colm, 34  
2 Bino-  
\$6.00.  
W. Va.  
4-38

\$38.00.  
Others  
Lyman  
mounts,  
porters,  
Krag 22  
Win-  
rel, in-  
Lovell,  
chester,  
rfield as  
38 and  
M&P 38  
\$30.00.  
B. Bar-  
ner Ave.,  
4-38

00. Five  
Grand  
4-38

inchester  
red 350  
penk pad,  
repensker  
e, Long  
NTED—  
ul Mur-  
4-38

nd \$3.71  
gime.  
4-38

Zeiss  
leather  
52 Win-  
nchester,  
eavy SS,  
Remington  
Montauk  
4-38

EMAN

COLT Camp Perry 10". Roper Grips, Heiser Flap  
Holster, excellent, \$27.00. Harrington & Richard-  
son Single Shot, 7" Heavy Barrel, No. 4 grip, Heiser  
Flap Holster, all perfect, \$20.00. Webley Mark 11  
Air Pistol, excellent, \$8.50. Krag with sling, good,  
to Member only, \$12.00. David P. Platt, 5316  
Tilbury Way, Baltimore, Md. 4-38

COMPLETE Stock Reloading Tools, Bullets,  
Primers, Cases, Powder, Peters 45 auto rim  
cartridges, \$1.90 per 100. Shoulder Holster,  
\$1.95, 2 1/4" leather cartridge belts, \$1.75. Law-  
rence Belt Holster, \$1.95. 100% Wool Sleep-  
ing Bag, \$15.00. J. Warshal & Sons, First &  
Madison-BB, Seattle, Wash. 4-38

LEICA G & Sumner F.2, case, new, \$130.00.  
Zeiss Silvamar, new, \$45.00. Winchester 54 250-  
3000, 48, new, \$42.50. WANTED—Winchester 21  
Skeet. H. E. Van Winkle, Stone Ridge, N. Y. 4-38

38 COLT Super, holster, two magazines, action  
smoothed by Buchanan, excellent, \$25.00. 45 Colt  
Alaskan revolver, perfect, \$20.00. 10x45 Prism  
Binoculars, Naval gun factory, leather case, excel-  
lent, \$30.00. 8 M.M. Austrian Mannlicher straight  
pull war rifle, fair, \$6.00. 22 Single Shot 10"  
Stevens, good, \$7.00. 22 W.C.F. 25" heavy octa-  
gon barrel, fair, \$8.00. WANTED—B&L Prismatic  
Spotting Scope, Targetsport or ? L. G. Black, Trona,  
Calif. 4-38

52 H.B., Marble-Goss Ext. Rear, Vaver front,  
scope height, year old, \$50.00. 38-44 Outdoorsman,  
patridge sights, Roper stocks, Kings "Cockeyed"  
hammer, \$40.00. Both excellent. S. E. Nelson,  
Fergus Falls, Minn. 4-38

SEND FOR a Catalogue. Free. Westchester  
Trading Post, Mount Vernon, N. Y. 4-38

10% DISCOUNT Lyman, Scope, Weaver,  
Fecker, Unertl, Malcom, Pechar Scopes. New  
Redfield Mount \$8.00, \$20.00 value. 22 auto-  
matic pistol, \$16.50. J. Warshal & Sons, First  
& Madison-BB, Seattle, Wash. 4-38

SELL OR TRADE

25-06 NIEDNER Springfield, low bolt handle,  
bullet seater, components, Noske 2 1/2 X scope, very  
good, \$50.00. Lyman Targetsport 8X, excellent,  
\$40.00. Weaver #330, 1/4" click, 1936, very good,  
\$15.00. 25-20 Winchester 1892 new octagon barrel,  
peep sight, custom stock, excellent, \$20.00. WANTED  
—Winchester 70 Hornet, perfect. S. J. Larson,  
Courtenay, No. Dak. 4-38

MAUSER Pistol, 30, 5", No. 30893, blued like  
new, bore good to V.G. \$40.00. WANTED—Remington  
S.S. Pistol, 30-40, 30-06 rifle or tools in trade.  
L. E. Norman, 6 Magruder Ave., Riverdale, Md.  
4-38

WINCHESTER M52, 45 New Service, 22 Woods-  
man, 38 Frontier. WANTED—B&L Drawtube, 38  
Detective Special, Ideal Powder Measure, 38 Re-  
sizer & Lubricator. Floyd R. Mauk, Augusta, Kans.  
4-38

TWO COLT Army Specials, 38 cal., good. Smith  
& Wesson Safety Hammerless 4 inch 38 cal. Pearl  
grips, good. WANTED—Winchester or Stevens Target  
Rifle, Smith & Wesson 22, Reising Automatic Ma-  
gazines. G. F. Fries, Chambersburg, Pa. 4-38

SMITH long range double, twelve gauge, perfect  
condition, \$55.00. WANTED—257 Roberts, 48 Ly-  
man, very good condition. Enoch Robbins, 23409  
Happyland Ave., Hayward, California. 4-38

SELL OR TRADE—B.S.A., fine, \$42.00. Imported  
Hornet Pistol, \$25.00. 52 Sporter, beauty, \$37.00.  
455 S&W, \$26.00, good. 410 Double Hammerless,  
\$17.00. Ballard Hornet, \$30.00, good. WANTED—  
52 H.B., Good Spotting Scope, Scope, Ace. Gabel  
Phoebus, Mt. Carmel, Ill. 4-38

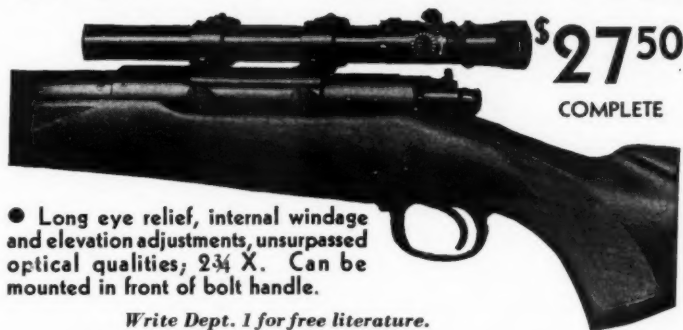
500 BOOK Library, many new in original boxes,  
complete sets Kipling, Cooper, Bryan, Schiller (in  
German), Burton's Arabian Nights, Encyclopedia.  
Sets imported china. \$200.00 set Austrian game  
plates, \$1500.00 oil painting by Emilio Sancho Per-  
rier; Violet Ray. Stamp for list. Prices reason-  
able, cash or trade for guns, scopes, etc. J. Warren  
Magee, Box L, Bishop, California. 4-38

WINCHESTER 52 improved model, excellent,  
\$25.00. Winchester A5 Telescope, mounts, \$15.00.  
Winchester 69 Check rest, sling, excellent, \$9.50.  
Malcom Telescope, side mounts and Winchester  
mounts, \$15.00. Marlin 39 Slow, Marbles Flexible  
good, \$11.00. "La Grande" 8x30, leather case, new,  
\$19.00. G. H. Huhn, Elberon, N. J. 4-38

SPRINGFIELD D.C.M. Sporter, fired 300, \$50.00  
or Smallbore, prefer 52 H.B. Hal Smith, 3617 45th,  
San Diego, Calif. 4-38

FOR SALE or TRADE 1936 Ford automobile  
radio, in sealed factory carton, never unpacked,  
\$30.00 or what have you? Richard Bruffee, Shel-  
burne Falls, Mass. 4-38

## MODEL 330 WEAVER SCOPE



• Long eye relief, internal windage and elevation adjustments, unsurpassed optical qualities; 2 3/4 X. Can be mounted in front of bolt handle.

Write Dept. 1 for free literature.

**W. R. WEAVER COMPANY El Paso, Texas**

## HEADSPACE GAUGES



—30-06 ONLY—

Hardened, ground and lapped to size—accurate to tenths.

Min. 1.940" ..... Postpaid \$4.50

Max. 1.946" ..... Postpaid 4.50

No packing charge—and you don't have to wait all summer to get 'em.

Our popular case trimmer is available in over twenty calibers. Price, complete, for one caliber, \$7.50. Two calibers, \$8.50. Three, \$9.50, etc.

Cartridge Case Gauge (checks cone-to-head and over-all length of 30-06 cases)...\$3.50. We are tooled up for ACCURATE chambering work in all popular calibers and we carry in stock Winchester Proof Steel barrel blanks—famous for their long life under hot loads and for their accuracy. These blanks are finished at the factory as to bore and rifling but have no shank, no thread and no chamber. If you have a special target job in mind we would like to figure with you. We have a circular on barrel work and one on our line of tools and gauges. Either or both will be mailed for the asking.

L. E. WILSON, Wilson Brothers, Cashmere, Wash.

★

If you reload in quanti-

ties, you should have a

Star Automatic Lubri-

cator and Resizer; also a Star

Progressive Reloader.

Send 3¢ Stamp for Folder.

**STAR MACHINE WORKS**

418—10th Avenue

San Diego, California

★

POINTER puppies. Whelped January 27. Pedi-

greed best hunting stock. Female \$20.00. Male

\$25.00, or value modern guns. F. Petrola, 2138

37th St., N. W., Washington, D. C. 4-38

TWO Noske Scopes, type A, #3, 4X complete,

excellent, \$55.00 each. 54 Hornet, custom stock

and checking, scope bases, 48, excellent inside, very

good outside, \$70.00, photo. L. C. Smith 20, 30",

ejectors, Lyman sights. V. G. inside, \$35.00. Win-

chester 12-12-30", V. G. inside, good outside, \$25.00.

Mauser pistol M712, 7.63 M.M., wooden holster-

stock, leather holster, V. G. to excellent, best offer.

New Lyman mount, \$9.00 3 point. DeLuxe Schick,

case, \$10.00 or Vaver MIL. WANTED—Bell & Howell

or Eastman Movie camera, 52 Winchester. G. H.

Holliday, 301 6th, Antioch, Calif. 4-38

WINCHESTER 3" 410 Pump, V. G., \$23.00. 16

gauge Browning Auto 28" M. raised rib, Poly Choke

barrel and regular F. C. barrel, good, \$35.00. 12

gauge Browning 30" M. raised rib, ivory sights,

good, \$30.00. Winchester 54 Hornet, Lyman 48

rear, scope blocks, \$25.00. Krag, remodeled, Red-

field sights, Hart magazine, good, \$27.00. Remington

S. S. Hornet Pistol, tapped for Weaver scope,

good, \$8.00. Weaver Int. Adj. scope, V. good, \$6.00.

WANTED—Leica accessories, Weston Leica-camera,

35 M.M. Auto Focus Enlarger. G. R. Larson, Madis-

on, Kansas. Life Member. 4-38

10% DISCOUNT on new Noske, Zeiss, Ly-

man, Weaver Scopes, Sedgley, Winchester,

Remington, Savage Guns; Pacific Loading

Tools. Delivered prepaid. Used guns, priced

right. 438 \$10.00. Will Trade. Ralph G. Allin-

son, 315 E. Mill, Santa Maria, Calif. 4-38

## WITTEK Dial Micrometer SIGHTS

ROUND RECEIVER

for 52 WINCHESTER

No. 5237 Telescope Height Extension

No. 5238 Standard Height Extension

Also Dovetail Mount-

ing Sights both Stand-

ard and Telescope

Height.

Exactly the type best suited to your rifle and shooting

style. 1/4 minute clicks (8 to the inch at 100 yards). Ab-

solutely accurate because both elevation and windage are

actuated by Frusto Conical Cams that cannot back lash.

These sights are also available for 37 Bangmaster, Sears

Ranger, Savage NRA, Stevens—all models BSA and other

target rifles.

NOTICE—1/4" Cams of any

Sight will be replaced with new

1/4" clicks on elevation and wind-

age; sight checked over, tuned up

and re-blued for \$3.00. Send

in your Sight today.

Standard Sights for All Rifles

For Winchester—all models: Spring-

field 30-06, M1 and M2; Savage 40

and 45; Remington Special and Ex-

press and other target and sporting

rifles.

WITTEK FRONT SIGHT

Telescope Block Mounting

This sight is Winchester standard height (1.065" between

centers). Dovetail body, mounting block and screw are hard-

ened—therefore, permanently accurate. Furnished with 8

quick-change aper-

tures, and mounting

blocks for dovetail

or screw mounting.

Complete assembly,

\$5.00.

Write for

Catalog.

070 .080 .093 .101 .111 .120 .136

WITTEK MFG. CO.

4308 W. 24th Pl. Chicago, U.S.A.

NATIONAL QUALITY

INLETTED

STOCKS

& BLANKS

Free Folder

Finest French, Circassian and

American walnut, seasoned

permanently. Guaranteed defect-free

throughout. Satisfaction or money back,

before or after working. Inlets 1/32"

small, for perfect bedding. \$6 up.

NATIONAL TARGET & SUPPLY COMPANY

DEPT. N-65, 1201-25th St., N. W., WASHINGTON, D. C.

MANNLICHER - SCHOENAUER

BLUING PROCESS is known as

the best. Send your gun to me

and have it reblued and refinished.

JOSEPH VON DRUSKA

Boston, Massachusetts



# GUNS



**\$5 brings this \$42.50 Winchester Pump Gun.**

**\$8 down brings this \$66 Savage Model 23D Hornet and Fecker Small Game Scope with standard mounts.**

**ON TIME**

Latest models, all leading makes, factory-new, 10 months to pay. Write for details (specifying make and model you want.)

## OFFICIAL NRA TARGETS

Only Targets on which scores are recognized by NRA. Lithographed. Cost no more than printed Targets. Sample and Price List Free.



## Complete SPORTSMAN'S CATALOG

1938 Handbook-Catalog by experts, 96 pages, fully illustrated, weighs about 1 lb., average mailing cost 15c, gives easy terms on every sporting need. Postpaid for 50c (stamps).



OWN THE BEST • ON EASY PAYMENTS

## NATIONAL TARGET & SUPPLY CO.

DEPT. R-4, 1201 25th St., N. W., Washington, D. C.



## OFFICIAL TRIGGER WEIGHTS

Every club should have an official weight for testing the trigger pull of rifles and pistols during club matches. Safety Rules as well as Shooting Rules require periodic testing of triggers.

Pictured here is the *only* official rifle trigger weight. It tests 3 lbs. and sells for \$2.00. A similar device which tests from 2 to 4 lbs. is available at \$2.50. It is the ideal all-purpose trigger test weight. Send orders with remittance to

**NATIONAL RIFLE ASSOCIATION**  
Barr Building Washington, D. C.

## REDUCED PRICES! STITH MOUNTS with ZEISS SCOPES!



**\$49.50**

*Installed & TESTED*

Zeiss Zielvier 4x scope and Stith mount \$79.50  
Zeiss Zielsech 6x scope and Stith mount \$89.50  
Cross hair or special graticule \$ 6.00  
(These prices include Fitting and Range Testing)

M. L. STITH • MILAM BLDG • SAN ANTONIO

## HANDEE

Tool of 1001 Uses

### A WHOLE SHOP FULL OF TOOLS IN ONE

For work on all metals, alloys, bone, resins, plastics, glass, stone, wood, etc. Uses 200 different accessories to grind, drill, cut, carve, sand, saw, engrave, sharpen, clean, polish, etc. Saves hours of tedious work. 13,000 r. p. m. AC or DC, 110 volts. \$10.75 and up, Postpaid. 3 Accessories Free.

### DE LUXE MODEL

Fastest, smoothest, most powerful tool for its type and weight, 12 ounces. 25,000 r. p. m. \$18.50 postpaid. 6 Accessories Free.

Get a Demonstration at your Hardware, Department Store or Tool Dealer, or Order Either Model on 10-days Money-Back Trial. Catalog Free.

**CRAFTSMAN'S PROJECT BOOK** "Pleasure and Profit with a Handee." Easy working plans for making many interesting and unusual projects, 25c stamps or coin.

**CHICAGO WHEEL & MFG. CO.**  
1101 W. Monroe St. Dept. R Chicago, Illinois

☐ Send Catalog ☐ Project Book ☐ \$10.75 ☐ De Luxe ☐ Send C.O.D.

NAME.....  
ADDRESS.....



**HANDBOOK—How to Make and Use Bows and Arrows—90 Pages well illustrated (with catalog) 35c.**

**CATALOG—100 pictures—color spread—Instruction Folder. 10c.**

**CATALOG alone 5c. Stamps or Coin.**

**L. E. STEMLER—QUEEN'S VILLAGE—N.Y.**

**SAVAGE 23D 22 Hornet, L48, bead, heavy man's stock, fine condition, \$32.00. WANT—Smith hammer or Fox 12DB30; Winchester 52 22 bbl. only; S&W 45SA6; 45 Rev. bullet mould. J. Beecher, 50 No. Munn Ave., East Orange, N. J. 4-38**

**DELUXE B.S.A. 22 Target, excellent in V.G. out, B.S.A. sights, sling. WANT—cash, 52 Sporter, 99 R.S., fine 30-06. James M. Smith, Star Lake, N. Y. 5-38**

**AMERICAN RIFLEMAN, past ten years, \$10.00. Springfield barrel and receiver, 30-06, good, \$3.00. Remington Elliot 32 RF, four barrel, ring trigger, serviceable, \$7.00. WANT—Colt 25 or what? Harold Barnhart, Box 13, Chillicothe, Ohio. 4-38**

**COLT Detective 38 Special, inside perfect, outside good, box cartridges, \$15.00. Remington 22 Short Automatic, inside perfect, outside good; Western Field 12 ga. pump, 30 in. full, excellent inside, outside good; each \$13.50. WANT—Powder measure, Fecker Small Game Scope. A. C. Huber, Sheffield, Ill. 4-38**

**BALANCE, Beckers, Rotterdam, glass case, Sensitivity 0.1 grams, good, cost \$80.00, make offer. WANT—Winchester 52, Woodsman, Obed Haycock, 444 So. 13 East St., Salt Lake City, Utah. 4-38**

**.38 SP. Shooting Master, V.G., \$30.00, with Whitex and Pasco, \$35.00. Trade gun even for O.M.H.B. in like condition. F. R. Braden, Jr., Corapolis, Pa. 4-38**

**RIFLEMAN 1927-37, three missing, F.O.B. \$10.00. Colt 32-6" P.P., excellent, \$15.50, W52 rear sight, \$1.00. .38 R.F. Bulldog, V.G., \$5.00. WANT—Straightline ONLY. Alton Dexter, 137 Colfax, Fall River, Mass. 4-38**

**FOX-STERLINGWORTH Deluxe, 20-26, Skeet, ejectors, \$40.00. Woodsman 4 1/2", late. WANT—Heavy 22, Hornet, Spotscope? John McGuire, 149 E. Gilman, Madison, Wisc. 4-38**

**EXCELLENT K-22. Fancy Mexican holster, \$28.00 or Fecker scope, 54 Hornet, 52 Standard. J. W. Latham, 341 N. First, Grand Junction, Colo. 4-38**

**COLT .38 Officers Model Target, regular barrel, very good, \$25.00 or Reising like condition. C. H. Hinds, 208 Courtland, Topeka, Kansas. 4-38**

**OFFICERS Model 38 Special, perfect, \$32.00. Man's Elgin wrist watch, \$20.00 value. WANT—Ballard rifle, condition of barrel immaterial. Wm. H. Hecker, 3570 Fairmount Blvd., Cleveland, Ohio. 4-38**

**SEVERAL slightly used shotguns. What do you have? What do you want? Cutler Talley, Box 1158, Atlanta, Ga. 4-38**

**REMINGTON 241 Automatic 22 short, strap connections, Weaver Scope, excellent condition, sell or trade for 410 Pump or 20 Automatic bird guns. C. W. Briscoe, Grenada, Mississippi. 4-38**

**UNIVEX movie camera, projector, case. WANT—Target rifle, K-22, Woodsman, what have you? Renn Torbert, Kalispell, Mont. 4-38**

**REMINGTON Sportsman, 16x28" full, solid rib, deluxe case, excellent, \$40.00. Ballard 38-55, D.S., extras, \$25.00. Winchester heavy S.S., D.S., 32-40, \$15.00. WANT—Good double, Winchester #95-30-40, or? Edward Knobloch, 1552 Victory Boulevard, Port Richmond, N. Y. C. 4-38**

**COLTS 32 P.P. 4 in. 38-40 S.A. 4 1/2 in. 32 Auto. 45 Auto (Rem. U.M.C. make). Hi-Standard Model B. Sharps 50 cal. carbine. Model 92 Winchester 25-20. WANT—Officers Model 38 or 22 or K-22 or Winchester 16 Skeet Model or Standard. H. S. Hughes, Richmond, Mo. 4-38**

**S&W 45 1917 holster 40 cartridges \$15.50. Cartridge collection over 200 loaded-mounted. Best cash offer or trade. WANT—Woodsman 4 1/2", OM 38. Ernest Haeuser, Rugby, No. Dak. 4-38**

**MODEL 12-16-26 full, \$27.00, or 330, B&M 2 1/2, Zielklein, Noske Scope. Robert Butts, Avon, Mass. 4-38**

## TRADE

**TRADE—Guns or other shooting equipment for scopes, binoculars, Colts, pistols, and revolvers, reloading tools or sights. Exchange Dept., Pacific Gun Sight Co., 355 Hayes St., San Francisco, California. tf**

**TRADE—Remington Model 25, 25-20, very good. WANT—Set trigger S.S. action, also Bisley Flat Top, preferably 38-40. Lewis Hammen, 200 Hubbard Bldg., Redlands, Calif. 4-38**

**TRADE—Winchester 52 Standard Speedlock, very good, for Outboard Motor. Sell for \$30.00 or best offer. Kellogg Wheeler, Greene, N. Y. 4-38**

**WHAT have you for National Match 45 Automatic, perfect. L. D. Roberts, Eagle Lake, Texas. 4-38**

**TRADE—22 Winchester Model 69, excellent; Packard Electro Shaver, new. WANT—1917 Enfield. H. J. Preshering, Geraldine, Montana. 4-38**

**TRADE—New 52 Winchester Sporter in factory carton, want guns, or best cash offer. Harold Klein, West Bend, Wisconsin. 4-38**

**TRADE—German duo camera, 120, f.4.5 lens, 1/25-1/100 shutter, 8 or 16 pictures, excellent, original box, for good 6 1/2" Woodsman or K-22. Geo. Hall, Box 175, Palm Springs, Calif. 4-38**

**TRADE—Parker G.H. 12-30, Damascus, fair to good, for Bisley flat top target. Fred Smith, Middlebury, Vermont. 4-38**

**WINCHESTER 94, 25-35 Carbine, V.G. Trade for V.G. Shot revolver or what? Ray Johnson, Box 220, Rt. #1, Santa Maria, Calif. 4-38**

**\$15.00 Packard Lectro-Shaver. Used 3 weeks. Excellent. For—Very good H&R SA, good 45 Auto, or fair Springfield 1906. Arthur Moss, 1644 Fletcher St., Chicago, Ill. 4-38**

**TRADE—\$60.00 credit I.C.S. for Woodsman, K-22 or O.M.T. 22. V. W. Hartley, 1405 Brunswick, Indianapolis, Ind. 4-38**



## WANTED

**CASH FOR** dealers and collectors lots of guns, ammunition, fishing tackle, etc. Hersheys, Orrville, Ohio, Phone 1008R01. 6-38

**WANTED**—Very good heavy set trigger action, preferably Winchester, also Bisley Flat Top 38-40, good, or any other caliber, barrel immaterial. Lewis Hammen, 200 Hubbard Bldg., Redlands, Calif. 4-38

**WANTED**—Palma Match Ammunition, not later than 1937. State price and condition. A. J. Casper, 116 36th Street, Union City, N. J. 4-38

**WANTED**—Pope-Winchester .32-40, Remington alteration .38, Stainless 52 or 90. S. Leonard, Dell, Montana. 4-38

**WANTED**—Luger Pistols in any condition. Will pay cash. Stoeger Arms Corp., 507 5th Ave., New York. 4-38

**WANTED**—Set trigger Ballard action, .22 caliber, mechanically perfect. N. F. Harriman, Room 767, Procurement Bldg., Washington, D. C. 4-38

**WANTED**—I will pay cash for an excellent embedded O.M. .22. H. R. Wollard, Burke, Idaho. 4-38

**WANTED**—For cash, new Smith & Wesson .22 caliber Single Shot Olympic Model, ten inch barrel. Must stand factory inspection. Shelby Wishart, Central Union Bank Building, Evansville, Indiana. 4-38

**WANTED**—22 Rifle. 30-06 Rifle for hunting. Bolt actions. 4X and 6x30 B&L binoculars. All excellent to perfect. J. E. Hutsiniller, 3 West 27th, Spokane, Wash. 4-38

**WILL PAY \$35.00** for best Kentucky Flintlock offered. Dwight Fee, Sun-Telegraph, Pittsburgh, Pa. 4-38

**WANTED**—Standard 52 Speedlock. State condition, sights, serial number, equipment. Harold LeRoy, Broad St., Ridgway, Pa. 4-38

**WANTED**—45 Cal. Colt Automatics, workable condition, cheap. Wanted new 45 Colt Auto barrels. R. Newcome, Johnson St., Lynn, Mass. 4-38

**WANTED**—Lyman or Fecker rear mount non click, S&W 1917 or Colt SA 45. Fred L. Jensen, Woonsocket, S. D. 4-38

**WANTED**—Savage 99 RS .300. Winchester 70 .220 Swift, Standard Winchester 71 .348. T. Livingston, 60 Richmond St. East., Toronto, Ontario. 4-38

**WANTED**—Colt's Percussion Revolvers, Kentucky Flint Lock Rifles and engraved Ballard Actions. All must be in first class condition. Ralph Mezger, 57 James St., Ossining, New York. 4-38

**WANTED**—Zeiss Zielvier 4X very good or better, also Lyman 48 for Springfield Sporter. J. E. Montgomery, 627 Gower St., Los Angeles, California. 4-38

**WANTED**—Ideal lubricator and sizer for .38 and 38 Winchester; Ideal tool for .38 special; B&M mold for .38 special; powder measure. James M. H. Cullender, Roswell, New Mexico. 4-38

**WANTED**—Winchester Model 12, 97, 52, 94, Krag; also stocks for same. Winchester 32-40 SS barrel, 48J. Fred X. Johnson, Marseilles, Illinois. 4-38

**WANTED**—For cash, 30-06 Springfield, stock and barrel immaterial. W. Schlenger, 456 Palm Drive, Oxnard, Calif. 4-38

**WANTED**—Paterson Colt Cylinder, Caliber .34; Also Percussion Colt Accessories. Richard D. Short, Woodstock, N. Y. 4-38

**WANTED**—Baroud 33 power Spotting Scope, excellent, must be reasonable. Robert Lowry, Box 241, Wheatland, Wyo. 4-38

**WANTED**—B&L Prismatic, 48S, Targetspot, Springfield, give Receiver No., barrel date. H. R. LaChat, 321 Harrison Ave., N. W., Canton, Ohio. 4-38

**WANTED**—To handle used guns for responsible firm. Good prospect. Write John Dupras, Plattsburg, N. Y. 4-38

**WANTED**—Russian S.A. Target Revolver, any caliber. Morgan Van Matre, 5547 Arnsby Place, Cincinnati, Ohio. 4-38

**WANTED**—Standard 52 Winchester, heavy. Excellent. Reasonable price. C. W. McKay, Rhinelander, Wis. 4-38

**WANTED**—32-40 and .22 L.R. barrels for Stevens 44½. Trade Ithaca #4 double, 12 ga., for Scheutzen. T. J. Cooper, McVeytown, Pa. 4-38



## The Most Accurate Powder Measure!

Shooters everywhere know that the double chamber B & M "VISIBLE" is the most accurate Powder Measure obtainable. The charges thrown by the B & M are correct in weight and all alike. Charges are not affected by the amount of powder in the hopper. Send a three-cent stamp today for the folder describing this and the other high-grade B & M reloading equipment, or send 50¢ for the B & M Handbook, the most complete and up-to-date book on Handloading.

### BELDING & MULL

George McG. Fryberger, Successor  
830 Osceola Road  
Philipsburg, Pennsylvania

## Watch For NOSKE RIFLE TELESCOPE

Reconstructed to be Superior to all  
other makes on Earth of equal size

**Semi-machine  
made Roper  
designed stocks**

Now ready for Officers Model and Camp Perry Pistol. Made to fit your hand, of beautiful Crotch Walnut, plain checking (no scroll), \$5.00. Money back if not satisfied.

W. I. SMITH  
76 Madison Street, Chicopee Falls, Mass.

**CHEER UP! OLD (AND NEW) SHOOTERS**

Clear up dim vision on sights and target, with the new Multiple Pin-hole Disc. Clips on any glasses or goggles. Eliminates glare and gives distinct definition to front and rear sights. Especially helpful to handgun shooters. Many enthusiastic users. Only \$1.00, postpaid. Kansas orders add 2¢ (sales tax).

L. A. BAUGH Patentee. U. S. Pat. Pend.  
**MATOK OPTICAL CO.**  
COFFEYVILLE KANSAS

**WILL PAY CASH** for Lugers; also Colt and S&W Revolvers; Krag and Springfield Rifles. Hudson, R-52 Warren Street, New York. 4-38

**WANTED**—32-44 S&W, blued, describe fully. J. D. Paull, Woodsdale, Wheeling, W. Va. 4-38

**WANTED**—High grade imported 12 shotgun, short barrels overunder preferred. Highly engraved Farquharson action or complete rifle. Cash and describe. R. E. Van Syckel, 30 Glencoe Road, Upper Darby, Penna. 4-38

**WANTED**—Issued Krag or Sporter; also 16 gauge double barrel. Andrew Kenney, 7725 Hamilton Ave., Wilkinsburg, Pa. 4-38

**WANTED**—Winchester A-5 Scopes, Springfield, Enfield, Krag Rifles, Krag Ammunition. J. Warshal & Sons, First & Madison-BB, Seattle, Wash. 4-38

**WANTED**—Miniature camera, very good mechanical condition, with or without coupled rangefinder. Give full details. A. W. Brune, Box 343, Winfield, Mo. 4-38

**WANTED**—11.2 M.M. Rimless cartridges loaded or empty. R. C. Ward, Missoula, Mont. 4-38

**ANTIQUE FIREARMS.** Will buy collections for cash. No trades or consignment. J. Serven, Sonoita, Ariz. 6-38

**Now!**  
THE OIL  
YOU'VE  
ALWAYS  
WANTED

**LANOLIN  
AND  
SPERMOIL**

**USE  
TRI-PAK  
GUN OIL**

**25¢  
AT YOUR  
DEALER**

Keeps your gun in perfect shape under all conditions. The ONLY combination oil that does a perfect job of cleaning, protecting and lubricating.

**NOT AFFECTED BY HEAT OR COLD!**  
Lubricates, Cleans, Solves

Lanolin and Sperm oil base — keeps action from freezing up even in sub-zero weather. Will not dry up or gum even in the hottest weather. Lubricates, cleans bore, removes metal fouling and powder residue. Great penetrating and adhering quality — seals pores of metal against dampness. Prevents rust. Fine for tools, and for dressing and preserving leather. Available in pints, quarts, half gallons and gallons. Try a bottle — and ask your dealer about other TRI-PAK cleaning rods and equipment for pistols, rifles and shotguns... Write for folder.

**TRI-PAK GUN KIT, Inc.**  
50 Brady Street San Francisco, Cal.

**INLETED GUN STOCKS**

**\$5**

REQUIRE ABOUT  
ONE DAY TO FINISH

Send \$5 for Stoeger Peevina Walnut Stock for Enfield, Springfield, Krag, Mauser, Lebel, Winchester fine folder free.

**STOGER ARMS CORP.** 507 Fifth Ave. New York, N. Y.

**WESNITZER CASE TRIMMER**

This tool cuts to length, Chambers both inside and out IN ONE OPERATION. 500 cases accurately trimmed per hour. .30-06 and .22 Swift. Price \$10.10 postpaid.

**LAWRENCE WESNITZER, San Jose, Calif.**



**For shooters who want the best in optics and in light gathering power**



## Lyman JUNIOR TARGETSPOT Scope, 6X-8X

This new scope effectively combines low power with great brilliance of illumination to meet all requirements for small game hunting and target shooting. The 6X is recommended for hunting and short range indoor target shooting; the 8X for those who desire more magnification. Perfection of mechanical design similar to the Targetspot and Super-Targetspot scopes. Extra

wide field 6X, 16 ft.; 8X, 14 ft. at 100 yards. 19 mm. objective free aperture. Bausch & Lomb super-fine polaroid tested optics. Non-rotating objective lens. Adjustment for individual and range focusing. Easy parallax elimination. Lyman 3-point rear mount. With mounts, bases, taps, drill, rubber eye piece and metal lens caps, \$45 f.o.b. Middlefield. Free Folder.

**THE LYMAN GUN SIGHT CORP., 90 West St., Middlefield, Conn.**

**IF YOUR TARGET ISN'T OFFICIAL  
YOUR SCORE DOESN'T COUNT**

**Buy OFFICIAL NRA TARGETS LITHOGRAPHED**

**EXAMINE A GENUINE LITHOGRAPHED SAMPLE AND PRICE LIST FREE. WRITE FOR THEM.**

Examine a genuine lithographed sample; see why champions use lithographed targets to make high scores. Special material jet black non-glare bullseyes, clean white rings, sharp bullet holes, unvarying uniformity. Postcard brings free sample and price list.

## RIFLES, SHOTGUNS, SCOPES, CAMERAS—Buy on time

Complete facts revealed in 1938 Handbook and Catalog, 96 pages, 8 1/2 x 11 in., fully illustrated, weight about 1 lb., average mailing cost us 15c. Written by nationally acclaimed experts. Gives new easy payment plan, other buying helps. You need it. Postpaid for 50c (stamps). Write NOW.

**OWN THE BEST • ON EASY PAYMENTS**

**NATIONAL TARGET & SUPPLY CO.**  
DEPT. R-77, 1291 25th St., N.W.  
WASHINGTON, D. C.

## ARMY-NAVY Bargains

Haversacks .....	\$ .75	Cart. belt .....	\$ .60
Machete-bolo .....	\$1.50	Flint pistol .....	\$6.95
Army saddle .....	\$9.85	U.S. Hunting knife ..	\$1.25
Springfield rifle 50/70.....\$3.50			

New 1938 catalog, 286 pages of pistols, armor, guns, daggers, etc., mailed for 50 cents. Special circular for 3c stamp. Established 1865.

**FRANCIS BANNERMAN SONS, 501 Broadway, N.Y.C.**

## SHOOT BENJAMIN GENUINE COMPRESSED AIR PISTOLS WITH SAFETY

**FOR TARGET & SMALL GAME—ECONOMICAL—ACCURATE—PRACTICAL—ADJUSTABLE FORCE—AMAZING MAXIMUM VELOCITY—SAFE. Single Shot with Bolt Action—Hammer Fire—Hair Trigger—Safety—cal. 177 or 22 w 50. Price \$7.50. Holster \$2.00. Also 177 and 22 Single Shot Air Rifle \$7.50—Single Shot BB Air Rifle \$6.00—18 lbs. BB Repeater Air Rifle \$7.50. At Dealer or Direct—No license required—SAFE. The only genuine compressed air pistols and rifles for shooting BB on the market. Full Details—Targets Free—Write Today for Introductory Offer.**  
Benjamin Air Rifle Co., 807 Marion St., St. Louis, Mo., U.S.A.

**-AND ALL BECAUSE I DIDN'T OIL MY GUN WITH 3-IN-ONE-**

You can always depend on a gun kept clean with 3-In-One. Guards barrels against rust and pitting; limbers all working parts to make them instantly active. At hardware, sporting goods, drug, 10¢ stores.

**3-IN-ONE OIL**

## THE TRADING POST

Bargain lists and announcements by the makers and distributors of everything used by active outdoorsmen and sportsmen collectors. New advertisers are required to furnish at least one bank and two business references. We believe they are all straight shooters and thoroughly reputable, but we request an immediate report of any unsatisfactory dealings.

## FIREARMS—GENERAL

**CLOSING OUT! Our American and English cartridge revolvers. Send for list. Stamp please. Kimball Arms Company, 220R Cambridge Road, Woburn, Mass.**

**BRAND NEW WINCHESTERS, Model 70, in nine calibers, \$50.00, with Lyman 57W micrometer, \$56.00. Model 94 Carbine 30-30, 32 Special, \$25.75. Model 92 rifles, carbines, caliber 44-40, \$24.00, caliber 32-20 rifles, \$25.00. Special prices on other new guns. Trades accepted. C. C. Tropp Sporting Goods, 225 Lafayette Street, New York. 4-38**

**REMINGTON Express 257, and scope: Savage 23-C 32-20; Standard cal. 35 Remington; Smith Specialty Trap 12-34; Winchester Lever 25-20; Winchester Trap, Model 12; Savage Model 40, 30-06 new; Savage 99R 303 new. Cash offer or trade pellet guns, 16 and 20 gauge shotguns, 22 cal. Target or Repeater. Herman Treptow, 209 So. Main St., Milltown, N.J. 4-38**

**#4 ITHACA Single Trap gun, 32 inch, good, \$60.00. Winchester 54 Target Model, 48W and 17 A, perfect, \$80.00. Ithaca, 6 lbs., 12 gauge, 26 inch, gold trimmed, custom built, excellent, \$75.00. Winchester 12 gauge Skee Pump, with Cutts, excellent, \$60.00. Remington Hepburn, 38 cal. Single Shot, good, \$25.00. L. P. Wood, Sporting and Athletic Goods, 78 Church Street, Burlington, Vermont. 4-38**

**10% OFF on all standard guns or scopes to N.R.A. Members. We furnish M/70 Swifts with magazines altered for Spitzer loads at no extra cost. Can furnish M/70 Hornets altered for .22-3000, chamber and magazine, standard or 2-R cartridge, \$75.00. Smith's Custom Loads, Middlebury, Vt. 4-38**

**30-06 CARTRIDGE, late issue, \$3.00 per 100. Fox Sterlingworth Double barrel hammerless shotguns, 12 gauge, 28, 30 and 32" barrel, fine condition, \$25.00. L. C. Smith double barrel, specialty grade, hammerless trap gun, ventilated rib, beaver tail fore-end, hunter one trigger, automatic ejector, ivory bead sight, 32" full choke barrel, perfect inside and out, \$85.00. Winchester model 42 pump action skeet gun, like new, \$32.50. Lyman target spot 10 power telescope sight with mounts, brand new, \$42.50. Complete Illustrated Catalog, modern and antique guns, send coin, 25¢. Public Sport Shops, 13 South 16th Street, Philadelphia, Pa. 4-38**

**COLTS NEW SERVICE caliber 44-40 4 1/2", \$19.50. Police Positive, caliber 32, 2 1/2" 4-6", \$18.95. Hi-Standard automatics, \$16.50. Woodsman, \$28.00. H&R USRA single shot target, \$25.50. All brand new. Trades accepted. C. C. Tropp Sporting Goods, 225 Lafayette Street, New York. 4-38**

**COLT Bisley's, Frontiers, Automatic Pistols, Lugers, Revolvers, Shotgun, Rifles, Bisley 32-20 7 1/2", good, \$15.00. List. T. C. Hansen, Caney, Kansas. 4-38**

**M-1909 .45 COLT D.A., fine, \$15.00. 58 Remington M-1863 Zouave rifle, new, \$15.00. 45-80 Springfield, new \$15.00. 45-70 Springfield, new, \$10.00. Pistol case for 44 C&B Colt or Remington, new, \$6.50. 44 C&B 6-ball mould, \$5.00. 30-45 re-decapping tongs, \$1.60. 45 Colt S.A. resizing dies, 65¢. B. K. Wingate, Box 481, Reading, Pa. 4-38**

**NEW GUNS: Winchester 53 32 WCF, \$25.00. 92, 32 WCF, \$25.00. 70, \$55.00. 94 Carbine, \$27.50. 64 Deer Rifles, \$45.00. 97 Pumps, \$27.50. Flaig Brothers, 817 East Ohio Street, N.S. Pittsburgh, Pa. 4-38**

**FACTORY NEW EQUIPMENT in Sealed Factory Cartons! Winchester: M70's, \$48.00. New Type M52's, Standard, \$45.00. Heavy Barrel with 48-FH, \$61.25. 64 Deer, \$45.50. Savage Arms: M99-G, \$43.25. M99-T, \$41.75. M99-R, \$42.25. M99-RS, \$50.00. Fecor Scopes: 1 1/2", \$66.75. 1 3/4", \$85.00. 3 1/4", \$135.75. Small Gam. 331.00. Lyman Super Targetspot, \$60.25. Targetspot, \$48.50. All with 1/4 click mounts. Weaver 330-C & S, \$23.00. 440-C & S, \$27.50. 29S, \$10.00. S&W, Colt Arms. All iron sights, reloading tools, bullets, cases, primers, powder. Zeiss scopes and all hunting mounts. Absolutely lowest prices. Carlton Hays, Sardis, Mississippi. 4-38**

**ORIGINAL Springfield 30-06 as issued, blue worn, very good in, checkered trigger and butt-plate, sling, \$16.50; Winchester high wall action muskets cal. 22, take down model, action very good, fair in, \$8.50; Bisley, cal. 41, nickelled, between good and very good, belt, holster, \$16.75; Ammunition; 45 auto, late commercial, not gilding metal bullets, \$2.75; Springfield 30-06, 1937 stock, \$3.25; Lee Navy 6 m/m, S. P. 112 grain, \$3.50; 7 m/m Mauser, M.C. 175 grain, \$3.50; 7.65 m/m Mauser, S.P. 215 grain, \$3.00. Martin Retting, Hightstown, N. J. 4-38**

**REMINGTON Improved Model 6 Single Shot caliber 32 rimfire 20" barrel, also a few smooth-bore \$4.00. Haenel "Shmeisser" caliber 25 automatic, \$10.50. All brand new. C. C. Tropp Sporting Goods, 225 Lafayette Street, New York. 4-38**

**EXCELLENT Remington 20 Automatic, \$30.00. Western Field 16 pump, \$15.00. Remodeled 303 Ross, \$10.00. S&W 38 Special, nickel, pearl, \$17.50. S&W .455, \$15.00. S&W Regulation Police 32, \$15.00. Stevens Model 10, 22 pistol, \$7.50. 6 1/2" Schofield 32, \$12.50. Perfect Colt 45 Automatic, \$30.00. Good Colt 45 Automatics, (Commercials), \$17.50. Pocket Model 45 Automatics, \$12.50. New Service 44-40's, \$15.00. 32 Automatics, nickel, pearl, \$15.00. "New Pocket" 32, \$10.00. New Line 32 rim, ivory handles, \$10.00. S&W 38 break open, \$10.00. Corona Portable, \$8.50. Kleenbore 32 short RF, 30¢ box. 18" Atlas bench lathe for trade. Oran Delaney, Greenville, Texas. 4-38**

**SPRINGFIELD issue rifles new \$29.00, serials 650,000. New leather slings Gov't, \$3.00 dozen, single 70 cents postpaid. .30 cal. solid brass rods, \$2.75 doz. New 98 Mauser bolts, \$7.50. Krag, \$4.00. Springfield, used, \$4.00. Boat-tail ammunition, .06, .34, \$3.50-100, \$29.00-1000. Flaig Brothers, 817 East Ohio Street, N.S. Pittsburgh, Pa. 4-38**

**S&W OUTDOORSMAN 38-44, 6 1/2", excellent, with Heiser holster, \$28.50. Woodsman 4 1/2", perfect, with \$4.00 belt holster, \$23.00. DWM Luger 9 m/m, 7" barrel, very good, \$22.00. C. C. Tropp Sporting Goods, 225 Lafayette Street, New York. 4-38**



WINCHESTER #01 lever action shotgun, 12-30 modified. Case hardened action. Excellent. \$35.00. Hudson, R-52 Warren Street, New York. 4-38

REMINGTON Skeet Grade Sportsman 16 ga., 28" ventilated rib, beavertail fore-end, rubber capped grip, ivory sight, Poly Choke, excellent, in factory box. Cost \$85.00. Sell \$55.00. Warnhoff Sales Co., Boonville, Mo. 4-38

BEST NEW GUN VALUES. Special: New Colt 44-40 New Service 4 1/2 inch Prepaid \$20.95. FOLLOWING Used Bargains: Winchester 86 38-56 good, \$12.50; Savage 99G one each 300 and 30-30, barrels perfect, outside good, \$25.00 each; Winchester 54 220 Swift, perfect throughout, \$35.00; B&L Draw Tube, perfect, \$22.50; Wollensak Draw Tube, perfect, \$8.50; Winchester 52 Speedlock, Standard barrel and sights, excellent, \$30.00; Lyman 5A Scope, 1/4 minute clicks, perfect, \$20.00. John J. Tobler, 507 32nd Street, Union City, N. J. 4-38

BARGAINS: Brand New. H&R 22 Cal. 2 1/4" Defenders. (Regular \$23.85), \$15.95; one single action 22 cal. Defender, \$11.95. Colt's Police Positive 32 cal. 2 1/4-4-6", \$19.95. S&W 32 & 38 cal. top break, double action; pearl stocks, like new, \$13.95. Free catalog. Lee Sales, Dept. E, 35 West 32nd St., New York City. 4-38

WINCHESTER 52 Standard, 1935 Model, new, with Lyman 17 front, Marble Goss rear, \$51.00. Special! Special! Westchester Trading Post, Mount Vernon, N. Y. 4-38

NEW GUNS. Winchester 70, all calibers, \$50.00. Best prices on all other makes. Target-spots, \$47.00, Supers, \$59.00, Juniors, \$36.00. Used Guns, excellent, Remington 241 L. R. 34 Winchester 30-30, .25 Colt, Woodsman 6 1/2", N. J. Trades. Robert Haelig, Boundbrook, N. J. 4-38

LET US QUOTE you on Winchester, Remington, Browning arms. Model 70, any caliber fitted with new Weaver 330 and Stith mount, B&L Drawtube or Prismatic in stock, Unertl, Lyman and Zeiss scopes, 10X coats. We trade, see page 60 March Rifleman. Write for used list. J. L. Vincent, Sporting Goods, Aud, Missouri. 4-38

ALWAYS LOWEST PRICES!!! Now a liberal payment plan too! 1938 Catalog Dime. Zeppelin Arms, Akron, Ohio. 4-38

#### AMMUNITION & RELOADING SUPPLIES

PACIFIC RELOADING TOOLS in trade for good used rifles or other shooting equipment. Address Exchange Dept., Pacific Gun Sight Co., 355 Hayes St., San Francisco, Calif. 4-38

SPECIAL PRICES to N.R.A. members on all new reloading tools. Write us your wants. C. C. Tropp Sporting Goods, 225 Lafayette Street, New York. 4-38

FULL LENGTH shell resizing dies of hard tempered steel, \$1.50 each; straight line bullet sizing dies, \$1.50; adjustable straight line bullet seating tools, \$2.00. Postpaid and guaranteed. R. D. McCaslin, Centralia, Kansas. 4-38

NEW .357 Magnum H.P. bullet. Write for price list, and data on loads for rifles. Guy Loverin, Lancaster, Mass. 4-38

SELECTED CARTRIDGES per hundred: 1918 issue 30-06 Gov't., \$2.25; 1932 issue Boat-tails, \$3.50; Late issue, \$4.50; .45 Auto, late issue, \$3.00. Stamp for 1/4 million cartridge list. Hudson, R-52 Warren Street, New York. 4-38

I AM PLEASED to advise all my friends and customers that I am now operating the Jordan Multiple Reloading Press manufacturing marketing and servicing under the name of L. W. Jordan, Brookville, Penna. 4-38

57 DIFFERENT shaped copies. Only Lovell 22-3000 tested two years by Editors and hundreds pleased owners with precision fitted dies, reamed with factory reamers. Owners are not in clutches of custom load racket. 3150 velocity, best accuracy. Safety to eyes with heaviest charges. Hervey Lovell, 3345 North Gale, Indianapolis, Ind. 4-38

"IPCO"—Colloidal Bullet Lubricant eliminates leading. Box (2 sticks) \$1.00. IPCO Colloidal Graphite Waxes for better groups—.033", .046", .064". Box \$1.00. Sharps Formulas. Industrial Products, 146 Summer, Boston, Mass. 4-38

MOON'S Sight Blackening Candles. Bullet Lubricants, Sticks 306, Cakes 506. Imitation ivory, Buffalo-Horn, Colloidal Oil. Books. Sperm Oil. Tools. Accessories. Supplies. Etc. James E. Moon, 782 Amsterdam Avenue, New York, N. Y. 4-38

## A NEW REDFIELD MOUNT FOR THE Weaver SCOPE



Very low. Absolutely rigid. Positive adjustment. Instantly removable without affecting zero. Same principle, quality and precision workmanship as famous Redfield bridge-type mount. Made for .22 Cal. and high power rifles. Price only \$8.00. For Zeiss Zielklein \$10.00. Ask your sporting goods dealer or write for descriptive folder.

29-S Weaver Scope and New Redfield Mount..... \$19.50  
330 Weaver Scope and New Redfield Mount..... 35.00  
Zeiss Zielklein Scope and New Redfield Mount..... 46.00

REDFIELD GUNSIGHT CORP.

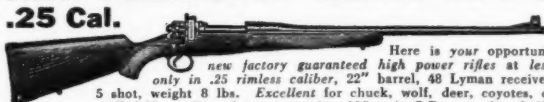
3315 Gilpin St., Denver, Colo.

## NEW REMINGTON MODEL 30-S Express Rifle!

.25 Cal.

only \$49.95

(as illustrated)



Here is your opportunity to secure one of these brand new factory guaranteed high power rifles at less than wholesale cost. Furnished only in .25 rimless caliber, 22" barrel, 48 Lyman receiver sight, gold bead front on ramp. 5 shot, weight 8 lbs. Excellent for chuck, wolf, deer, coyotes, etc. Only \$49.95 each. EXTRA SPECIAL on .25 rimless ammunition, 117 grains O.P. expanding bullet, non-corrosive (per 100) \$3.75. Winchester 94 30/30 or 32 Special 20" carbine..... \$27.50  
Winchester 92 32/20 24" rifle, 1/2 or full magazine... 28.50  
Winchester 92 44/40 carbine 20" barrel..... 26.95  
Colt New Service 44/40 caliber 5 1/2" blm..... \$28.95  
Gov't U. S. Army soft pliable sling straps, 1/4"..... 1.00  
Gov't Heavy flannel cleaning patches, per 200..... .35

HUDSON SPORTING GOODS CO. (Free New Catalog) R-52 Warren St., New York City

## SERGEANT'S SURE-SHOT CAPSULES RID DOGS OF WORMS. EASY TO GIVE



There are 23 tested "Sergeant's" Dog Medicines. Trusted since 1879. Constantly improved. Made of finest drugs. Sold under money-back Guarantee by drug and pet shops. Ask them for a free copy of "Sergeant's" Dog Book, or write: POLK MILLER PRODUCTS CORP. 734 W. Broad Street • Richmond, Virginia Copr. 1938, Polk Miller Products Corp.



POWDER, PRIMERS, BULLETS and CASES for all popular calibers. Sisk bullets. Samworth's books. State calibers interested in. Leslie Lindahl, Central City, Nebraska. 4-38

BARGAIN CARTRIDGES per hundred: .22 Savage high power, M.C., \$2.00, soft point \$3.75; 25-20 Winchester M.C., \$2.00; 32-20 M.C., \$2.00; 303 British M.C., \$3.75. Hudson, R-52 Warren Street, New York. 4-38

AMMUNITION SALE 30-06 per hundred. 20 issue, \$1.95; 33 & 35 issue, \$3.00. J. H. Thomas, 1104 Spring St., New Castle, Ind. 4-38

1918 ISSUE 30-06, 500, \$9.75. Zeppelin Arms, Akron, Ohio. 4-38

#### GUNSMITHING & SUPPLIES

GUN STOCK BLANKS: walnut, shotgun, plain, \$1.50, semi-fancy, \$2.00, fancy, \$3.00. Sporters, plain, \$2.00, semi-fancy, \$3.00, fancy, \$4.00. O. M. Friddell, 227 Davis, Findlay, Ohio. 4-38

EXPERT GUN ENGRAVING. We specialize in this art. Folder on request. R. J. Kornbrath, 37 Manchester St., Hartford, Conn. 5-38

## FECKER TARGET SCOPES

are the only Target Scopes in which the shooter can start with the moderate priced 3/4" Objective Scope, and later have it increased to the 1 1/8" or 1 1/2", as his shooting experience grows. The cost of increasing the power and light gathering is the difference in cost between the various models.

The 3/4" Scope with plain Non-Click Mounts, complete, is \$37.50. With 1/4 or 1/2 minute Click Mounts, complete, is \$45.00.

J. W. FECKER  
2016 PERRYSVILLE AVENUE  
PITTSBURGH, PA.

Telescope Sights Spotting Scopes and Team Scopes

## BELZ SHOOTING GLAS

"As Necessary As Sights On Your Gun" Equipped with genuine SHARP-SITE or BRITISH-SITE toric ground and polished lenses. Sharpens your vision, protects eyes from glare, ricocheting shot, "blow-backs." BELZ POLARIZED GLAS Eliminate glare and eye-strain. Clear underwater vision. 15-day Trial with plain glasses. Write for booklet.

W. H. BELZ, Inc., Opticians, 2 E. 44th St. N. Y. C.



## Colt-King and S. & W.-King Super Target Revolvers



Fitted with Ventilated Rib, reflector and Micrometered "Click" Adjusting Rear Sight. Any Type Front Sight. Luminous Red, White, Gold or Black, Bead or Post. Fitted to practically all models of revolvers with 5", 6" and 6½" barrels. Also Woodsman Pistols 4½" and 6½". Supplied on New Guns or Fitted to Your Gun. . . . \$20.00

### YOUR HAMMERS REMODELED TO KING "COCKEYED"

Without changing Trigger pull. Send Hammer only. . . . \$5.00  
KING RIBS and "COCKEYED" HAMMERS Make Revolvers "THE WORLD'S FINEST TARGET REVOLVERS."

Send stamp for descriptive circular and price list "A".

KING GUN SIGHT CO.

171-173 Second St.

SAN FRANCISCO, CALIF.

## WHY

**X-RING Centrifugal BULLET TRAP** is the best short-range back-stop for ALL CALIBERS

**X-RING**  
stops  
bullet  
by friction



1. First in safety. Cut shows why there is no dangerous back-splatter. This is an exclusive X-RING feature.
2. Most compact and portable.
3. Adjustability and perfect lighting system adapts X-RING to either home or club use.

Send for circular explaining these and other features found only in X-RING. Discount to NRA members.

King Gun Sight Co., San Francisco, Calif.  
Western Representative

**X-RING PRODUCTS CO.**  
503 North St. Peoria, Illinois

## ★ RELOADING TOOL HEADQUARTERS

Reloading Tools, Bullets, Bullet Moulds, Powders, Primers, accessories. Send stamp for folder.

Autographed copies of the "Handloader's Manual" are available; also all books by Samworth.

**MAJOR EARL NARAMORE**  
YALEVILLE CONN.

## CROFT'S Shooting Coats

The Camp Ritchie . . . Price \$4.50  
The Dewar . . . " \$5.15  
The 9" Possible . . . " \$6.00  
The Camp Perry . . . " \$7.85

Descriptive measurement folder of shooting coats, leather gun cases, shooting gloves, on request.

**H. & D. FOLSOM ARMS CO.**  
312 Broadway New York, N. Y.



## POTTER EQUIPMENT FOR BEST RELOADS

**DUPLEX LOADING MACHINE** complete with powder measure. . . \$35.00  
**GEM LOADING TOOL** . . . 17.50  
**ELECTRIC MELTING FURNACES**  
Model A for small moulds. . . \$10.00  
Model B for multiple moulds. . . 15.00  
**THREE CAVITY BULLET MOULDS** . . . 7.50

Send 3¢ Stamp for Circular

**Potter Engineering Co.**  
632 Scoville Ave., Syracuse, N. Y.

## FOOT COMFORT . . .



### TRAMPING or FISHING SHOE

Ideal NEW Model - by Nichols

This 9" light-weight, full-grain brown, water-proofed leather shoe is NAILESS (no nails), hand-sewed leather mid sole. NON-SKID CREPE Sole and Heel will doubly appeal to you, CREPE does not "draw" like rubber, the NON-SLIP TREAD assures firm footing under all conditions. You'll find this guaranteed shoe the one you've been seeking. "Nichols-made" for comfort. Whole sizes 6 to 12. ONLY \$6.45 postpaid. Write (Dept. D) for New Spring Catalog Mrs. Fishing, Camping and Hunting Equipment.

**R.C. NICHOLS CORP.**  
65 Main Street, Yarmouth, Me.

ONLY  
\$6.45  
Postpaid

## SELECTIVE SMALLBORE EQUIPMENT

New 10-X Imperial Model Rifle Coat. . . . \$9.00  
B. & L. Prismatic Scope 19½X. . . . 49.50  
Parker Celluloid Cvd Rod, 22 Cal. . . . 2.00  
Super Targetspot, 10, 12 or 15X. . . . 75.00  
Wesnitzer Shell Case Trimmer. . . . 10.00  
Freeland Arm Cuffs, De Luxe Model. . . . 3.25

All Items Prepaid

Official N. R. A. Targets

Write for complete free catalog of supplies

**WISLER WESTERN TARGETS**

543 Clay St., Dept. B, San Francisco

## EXPERT Gunsmithing

Fine equipment and expert staff enable us to offer precision work on modern and antique arms. We make springs and missing parts. Expert welding. Low number Springfield actions drawn and re-heated using government formula. \$7.50. We install the Engel single trigger. Will not double nor balk. \$25.00. Close chambering for 300 Mag., 30/06, and .257 Win. Roberts. Estimates promptly given. Fine stock work. Moderate prices. Prompt delivery. Send all work express prepaid.

Kimball Arms Co., 221 Cambridge Rd., Woburn, Mass.

**BARREL** only. 300 Magnum 38" length, 1" at muzzle, fits Enfield action, new, \$50.00. Barrel only, Model 52 Standard, new, \$7.50. Barrel only, Model 54, 26" 06, 4 lbs., fair, \$5.00. Stevens 44½ 22-3000 Lovell barrel, new, \$25.00. 22-3000 Lovell Krag, without stock, barrel new, \$20.00. H&R pistol 10", excellent, \$20.00. J. R. Buhrmiller, Eureka, Mont. 4-38

**WOODSMAN, HI-STANDARD**, special walnut stocks. Two models, or to your design, guaranteed to fit your hand. \$4.50. 3-4 oz. barrel weight. \$1.00. Details, pictures. Kenneth Strine, Waldo, Ohio. 4-38

**MAKER** of fine handmade percussion lock squirrel and turkey rifles. Cal Price, Orange, Texas. 4-38

**STOCK BLANKS**. American Walnut, Bird's-Eye Maple and French Walnut. John Reize, 8152 Cornell Ave., Chicago, Ill. 4-38

"**STAR STOCK**"; and complete Enfield remodeling. Circular. M. G. Ljutic, 127 37th Street, Richmond, California. 4-38

**HAMMER** spurs widened, lowered. Unusual action improvements. Trigger back slap corrected. Sights made. Stocks, Checkering. Rustless rebluing. R. Singer, 1610 Lake, Evanston, Ill. 4-38

**BRAND NEW 24"** barrels for Krag \$7.00, 30-06 Springfield \$8.00, 30-06 Mauser \$7.00, 30-06 Enfield, 26" \$3.50. Colt 1917, \$1.75. S&W 1917, \$2.25. Used excellent Colt 45 auto barrels, \$1.25. Springfield 1903 complete front sights, 60¢. Complete 1917 Enfield Bolts, \$2.00. Robert Woerner, 5829 Saul St., Philadelphia, Penna. 4-38

**CUSTOM** Sporting and Vermin Rifles; fine custom stocks, hand inletted. Robert U. Milhoan, R#3, Elizabeth, W. Va. 4-38

**MATCH BARRELS** fitted to your actions. Prices reasonable. Redfield sights. Lyman sights and telescopes. Peckers and Bausch & Lomb telescopes. 10X Shooting coats. Eric Johnson, 149 Helen St., Hamden, Conn. tf

**OREGON MYRTLE WOOD**, THE MOST BEAUTIFUL STOCK WOOD. Stocks, Blanks, Wood. Stamp for illustrated folder. D. H. Mosher, Salem, Oregon. 4-38

**GUNSMITH FILES**, Rasps, Gravers, Chisels, Gouges, Carving-tools, Spring and Toolsteels, Abrasives, Oilstones, etc., etc. F. Mittermeier, 3577 E. Tremont, New York City. 12-38

**WALNUT BLANKS** figured from \$4.00. Delivered free. Mitchell Bosly & Co., Ltd., Little Shadwell St., Birmingham 4, England. 11-38

**CHECKERING TOOLS**, hand made by Checkering expert. Set of three—Checker, border and cleaner; also directions, complete, \$2.75 postpaid. Warner's, 39R Geer Ave., Norwich, Conn. 4-38

**PERMABLU** guarantees factory type re-blue. Not paint. Gunsmith's favorite. Never fails. 50¢. Instructions easy. PermaBlue Co., Davenport, Iowa. tf

**SINGLE SHOT RIFLES** Parker-rifled to .22 Caliber. Finest Accuracy. Stamp for prices. W. A. Griffing, 514 W. State St., Milwaukee, Wisc. 6-38

**NIPPLES, WRENCHES, Moulds, Flasks**, repair parts for Muzzle Loaders. B. K. Wingate, Box 481, Reading, Penna. 6-38

**BARREL** Inletting Rasps, available in ¼" & ¾" diameters, each \$1.40. F. Mittermeier, 3577 E. Tremont Ave., New York City. 4-38

**WE ARE PREPARED** to chamber for the 22-3000. Can also re-chamber the Hornet for this new popular cartridge. Kimball Arms Co., 220 Cambridge Rd., Woburn, Mass. tf

**RESTOCKING**, Rebluing, Checkering, Percussion and Flint Arms restocked. Bailey, Lisbon, N. H. 2-39

**GUN PARTS**. For all domestic arms and also parts in the rough for shotguns of Belgian manufacture. Gunsmiths write for catalog. H. & D. Folsom Arms Co., Dept. R, 312 Broadway, New York City, N. Y. 5-38

**CUSTOM BUILT HUNTING and TARGET RIFLES**. Converting of suited actions to .22 Hornet, .22-3000, .219 Zipper, .220 Swift, .257 Roberts, .300 Magnum. Rebarreling. Jaeger Single Set Trigger for bolt actions. Hensoldt Scopes, Jaeger Quick Detachable Mounts. Ask for estimate. Paul Jaeger, 4655 Fernhill Rd., Philadelphia, Pa. 3-38

**CUSTOM GUNSMITHING**. Stocking. Checkering. Bluing. Remodeling. Alterations. Moulds. Prices reasonable. Satisfaction. Albert Rowe, Meadow, Tennessee. 4-38

**EXTRA Fancy Walnut Blanks** for pistol grips, 2x3x5 inches; thoroughly dry, price 50¢ each, postpaid. E. C. Bishop & Son, Warsaw, Missouri. 4-38

**YELLOWSTONE** remodel your Enfield to custom sporter, or target rifle. Charges reasonable. Folder. Gunsmiths for particular people. Yellowstone Gun Co., Columbus, Mont. 4-38

**AMERICAN Walnut Croch Burl**. Rifle and gun stock blanks. Grain running right in grip. Plenty of Circassian Walnut, too, up to 3 inches thick. Cheapest prices in U. S. A. Buy from wholesaler who has saw mill supervision, insuring the prettiest of Burl and grain. Inletting and shaping service to gunsmith, where you can save half your cost on any gun or rifle. D. W. Thomas, P. O. Box 184, Vineland, N. J. 4-38

**RESTOCKING SUPPLIES**. Rough turned machine inletted Sporter Stocks of Superior Quality. Selected American Walnut, \$5.50, also French and Circassian. Butt Plates, Grip caps, Sling Swivels, etc. New U. S. Army leather slings 80¢. Chambering Reamers. Ask for folder. Paul Jaeger, 4655 Fernhill Rd., Philadelphia, Penna. 4-38

**FINEST** grade Restocking and Checkering. Precision Chambering and Barrel Fitting for 22-3000, 220 Swift, etc. Elmer Key, Chelsea, Okla. 4-38

**PROFESSIONAL ENGRAVER**. Lettering. Ornamental, on Guns, Jewelry, etc. Herbert Hilton, 819 Capitol Park Bldg., Detroit, Mich. 4-38

**INLETTED STOCKS** for the Winchester single shot action, nicely shaped with high comb and cheek piece. Very select grade of American Walnut, price \$3.50 each. E. C. Bishop & Son, Warsaw, Missouri. 4-38



IMPROVE the shooting of your 45 auto, complete accuracy job, \$5.00; with recoil bumper and fixed target sight, \$9.50. Rifleman's Exchange, 3511 So. Figueroa St., Los Angeles, Calif. 4-38

\$1.00 EACH Springfield Rifle Barrels, 30-06 Caliber. Second Hand. Limited Supply. Weil's Curiosity Shop, 20 So. Second Street, Philadelphia, Penna. 4-38

ACCURATE Heavy and Sporting Barrels fitted for Donaldson .22-3000, Zipper, .220 Krag, .220 Swift, .257 Roberts, .250 Magnum, 30-06, 300 Magnum. Your choice of commercial barrels precision fitted. Stoeger and custom stocks, sights and scopes fitted. Estimates gladly furnished. WANT—35 Remington pump or auto, .348 Winchester, B&L Prismatic, .35 Whelen Springfield, exchange for fine vermin rifle. Pay cash for Winchester SS, Mauser actions. J. R. Adriance, Owego, N. Y. 4-38

INLETED and roughturned stocks for: Enfield, Springfield, Mauser 98, Spanish Mauser, Krag, Krag with sideplates removed, Winchester 52, 54, 69, 70, Remington 33, 341, Savage 19, 237, 23AA, 250-3000, \$5.00. Full length stocks for: Enfield, Springfield, Krag, Mauser, \$8.00. Targetstocks with high cheekpiece and beavertail forearm for heavy barrel for: Winchester single shot, Ballard, Stevens, \$5.00. American walnut. Inletting of customers blank and own model. All types of cheekpieces. Manhattan Gun & Repair Shop, 35 W. 44th St., New York. 4-38

HUBALEK Special Match Barrels fitted to your action and tested, \$30.00 to \$35.00. Fine alloy steel barrel blanks for gunsmiths, 22 L.R. and all other popular calibers, \$20.00. Latest Model Hubalek Machine Rest, \$25.00. Send for folder. A. Hubalek, .22-Caliber Specialist, 1167 Myrtle Ave., Brooklyn, N. Y. 4-38

#### BINOCULARS, SCOPES, SIGHTS & CAMERAS

BINOCULARS CLEANED AND REPAIRED. Alignment corrected to 1/1000 radian on our special collimator. Mail your glass for estimate. Mirakel Optical Co., Mount Vernon, N. Y. 11-38

RIFLE TELESCOPES for hunting and target; high in quality, low in price. Send for catalog. Malcolm Rifle Telescope Co., Auburn, N. Y. 5-38

READY. Send for our new illustrated catalog showing arms, scopes, and binoculars. Stamp please. Kimball Arms Company, 220 Cambridge Road, Woburn, Mass. 4-38

SCOPE SIGHTS, Binoculars—Repaired. Cross-hairs, Cleaning, Mounting, etc. Estimates promptly given. Moderate prices. Harley B. Watts, 88 North Roys Avenue, Columbus, Ohio. 4-38

ZEISS Binoculars, Spotting Telescopes, Leica Cameras; bargain list \$380 free. Brownscope Company, 5 West 27th Street, New York. 4-38

DOT RETICULES. Makes good shooting easier. Mail reticule only. Prompt service. \$2.00. See Dope Bag February. Satisfaction or money back. T. K. Lee, Birmingham, Ala. 6-38

CAMERAS. Used: Auto Graflex  $3\frac{1}{4}\times4\frac{1}{4}$ , Wollensak f4.5 lens, film pack adapter or roll film pack, \$55.00. Auto Graflex Junior,  $2\frac{1}{4}\times3\frac{1}{4}$ , B&L Tessar f4.5 lens, film pack adapter, \$45.00. Film pack camera,  $3\frac{1}{4}\times4\frac{1}{4}$ , Schneider Radionar f4.5 lens, double extension bellows, compur shutter, ground glass, film pack adapter, \$32.00. Film pack camera,  $2\frac{1}{4}\times3\frac{1}{4}$ , Zeiss Tessar f4.5 lens, double extension bellows, compur shutter with delayed action, ground glass, film pack adapter, \$38.50. New: Bee-Bee camera  $9\times12$  cm., removable Zeiss Tessar f4.5 lens, double extension bellows, compur shutter with delayed action, ground glass, film pack adapter, \$50.00. Foth-Flex twin lens reflex camera, super-fast f2.5 lens, takes 12  $2\frac{1}{4}$  pictures on #120 roll film, focal plane shutter with delayed action to 1-500th second, \$60.00. Candid Midget and Gevirette cameras, \$19.50 to \$52.50; send for literature. Primarflex,  $2\frac{1}{2}\times2\frac{1}{4}$ , \$145.00 with Meyer f2.8 lens; the world's finest camera; literature on request. Many others, new and used. No lists at present, but WHAT DO YOU WANT? Lewis Cummings, 444 Hancock St., Brooklyn, N. Y. 4-38

\$10.00 GOVERNMENT Spotting Telescopes, 25 power. Guaranteed. Weil's Curiosity Shop, 20 So. Second Street, Philadelphia, Penna. 4-38

SUPER TARGETSPOT \$7.50 down and \$8.55 monthly for eight months. 1938 Catalog dime. Zeppelin Arms, Akron, Ohio. 4-38

MARBLE GOSS Sights for Remington 37. Westchester Trading Post, Mount Vernon, N. Y. 4-38

## INTRODUCING



For cleaning and preserving all types of fire arms. Will completely remove all powder and primer residue, unburned powder, normal metal fouling, old oil, dust, dirt, etc. If used after cleaning it will act as a light rust preventer and anti-corrosive.

### THE KWH MFG. COMPANY

215 E. Lake Avenue Baltimore, Maryland  
See Dope Bag This Issue

## HI-STANDARD ANNOUNCES 3 NEW .22 AUTOMATICS (SUPPLEMENTING MODELS "B" AND "C")



Model "A", wgt. 36 oz. \$28.50 — "D", wgt. 40 oz. \$35.00 — "E" (not shown) straight-line bbl. slide and frame, wgt. 42 oz. \$40.00. For .22 long rifle rimfire. All bbls. are 6 $\frac{1}{2}$ ".  
HIGH STANDARD MFG. CO.  
151 Foote St., New Haven, Conn. SEND FOR FOLDER

FOR \$1.00. Complete information on obtaining individual copies of the 48 U.S. patents (drawings and specifications) on scopes and mounts at 10¢ each. Best information on subject available. One of many—a scope having internal reticule adjustments used in Civil War (a good one too). Synopsis of each patent included. John Coffin, 6207 Vernon, Chicago. 4-38

LIBERAL ALLOWANCE for your firearms toward Bausch & Lomb and Zeiss binoculars and all makes of motion picture and "still" cameras and projectors. All makes movie and still cameras and projectors and binoculars repaired. National Camera Exchange, Established 1914, 11 South 5th St., Minneapolis, Minn. 4-38

BINOCULARS: 10x35 hi-power, light weight; genuine prism, special \$24.95; Finest American made, spotting, 20X Telescopes, \$11.90; tripod and clamp \$5.95. Free catalog, Lee Sales, Dept. E, 35 West 32nd Street, New York City. 4-38

#### ACCESSORIES

CASWELL TARGET CARRIERS for 50 foot Junior outdoor ranges, eliminates danger while changing targets and speeds up range firing. One carrier conveys two targets. Price \$16.75. Caswell Target Carriers, Anoka, Minnesota. 4-38

UNIVERSAL SCOPE STAND for rifle and pistol shooters. Post card for prices and information. Loder & Wilson, 1014 Cherry St., Erie, Pa. 4-38

## Reloaded ammunition capable of close grouping is best produced with IDEAL TOOLS

Ask for full information on calibers of pistol, rifle or revolver case you wish to reload.



358 Rems  
148 Grs.

Midrange bullet for .38 Special revolvers. Over 700 different bullet moulds available.



Improved No. 10 Tool for rimless cases. No. 3 Tool for rim fire cases. Handles more than one style of bullet. Each \$3.50.

## IDEAL HANDBOOK

Practical and Complete



Recommended for its thorough treatment of all loading operations. Clear, concise. Data on powders and ballistics. List of 281 bullets. 160 pages, illustrated. Sent postpaid, 50¢

Free Booklet

THE LYMAN GUN SIGHT CORP.  
90 West St., Middlefield, Conn.

## Lawrence STEER-HIDE HOLSTERS and CARTRIDGE BELTS

No. 35 Cartridge Belt, with seven loops.			
Give waist measurement and caliber of cartridge.			
Postage prepaid	Flower stamped	Plain	
3 inch width	...	\$8.00	\$4.00
2 1/2 inch width	...	\$7.50	\$3.75

No. 27L Holster. Hand made, molded over forms to exactly fit your revolver, and lock-stitched. Give revolver and automatic model and barrel length or send tracing. Postage prepaid.  
Flower stamped . \$4.90 Plain . \$3.25  
If dealer cannot supply send order direct

Send 3¢ stamp for Sporting Goods catalog.

No. 27L  
The GEORGE LAWRENCE CO.  
Since 1857 PORTLAND, OREGON

OWN THESE ON TIME

Nationally famous guns, pistols, scopes, cameras, etc., about 100% down; 10 months to pay. Big Handbook-Catalog, 96 pages, 8 1/2 x 11 in., fully illustrated, weighs about 1 lb., average mailing costs us 15¢. Written by national experts, gives new easy payment plan, other buying helps. You need it. Postpaid for 50¢ (stamp). Write NOW. New Special Camera Catalog, 10¢ (stamp or cash).

NATIONAL TARGET & SUPPLY CO.  
DEPT. B-41, 1201 25th St., N. W., WASHINGTON, D. C.

## RICE PEEP SIGHT FOR KRAG



Rifle, \$1.00; for the Springfield, \$1.50. Elevation and windage. Easily mounted. Krag Barrel Receiver Fillets, 65¢. Springfield Spotter Butt Plates, 50¢. Grip Caps, 35¢. Satisfaction or money refunded.

LEROY RICE

336-7th St., Elyria, Ohio



## The NEW UNERTL 1" TARGET SCOPE

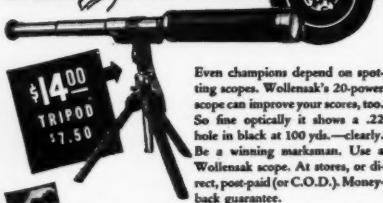


Available in 6, 8, or 10X; 21 1/2" long, and of unapproached quality at the very low price of \$35.00, less mounts, or with new Lyman target type mounts and bases, \$47.50. If you are interested in obtaining the best in a Hunting, Target, or Small Game Scope, write for free folder.

**JOHN UNERTL**

75-B Cemetery Lane, R.D. 4, Millvale Branch

Pittsburgh, Pa.



Even champions depend on spotting scopes. Wollensak's 20-power scope can improve your scores, too. So fine optically it shows a .22 hole in black at 100 yds.—clearly. Be a winning marksman. Use a Wollensak scope. At stores, or direct, post-paid (or C.O.D.). Money-back guarantee.

### USE AS TELESCOPE!

Ideal for hunting trips, boat, motor travel. Other telescopes from 8-power, \$1.75, to 45-powers, \$47.50. Write for FREE BOOK!

WOLLENSAK OPTICAL COMPANY  
468 HUDSON AVENUE • • • ROCHESTER, N.Y.

**WOLLENSAK**

## FREE! GUN CATALOG



Bargains in Guns, Scopes, Sights, Reloading Tools, Shotgun Rifles, Winchester M/70, Hi-Standard Pistols, H&B Sportsman, Lyman Alaskan Scope, Weaver #298, #330 Scopes, \$20.00 value, 22 automatic pistol, \$16.50. Genuine Winchester B-5 Scopes, \$13.95.

Fishermen! Send for Free Fishing Tackle Catalog, \$20.00 value Split Bamboo Fly Rod, with aluminum case, \$11.95, prepaid. Skiers! Free Ski Catalog.

J. WARSHAL & SONS  
First & Madison St. Seattle, Wash.

## GUNS\*

NEW 1938 CATALOG NO. 30

Just Out!!! 320 PAGES (Size 8 1/2" x 10 1/2")

All the New Guns, Latest Revisions, NEW Prices. NEW Items. NEW Bulletins. 13,250 items, 4,100 illustrations. Everything for the shooter. (Time Payment if preferred). Parts, Remodeling, Accessories, etc. ★ Send 50c in Check, M.O., Cash or Stamps to America's Largest Gun House.

**STOEGER ARMS CORP.**

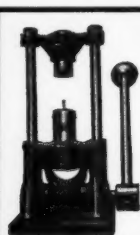
507 FIFTH AVE., NEW YORK, N.Y.

**ROPER'S ADJUSTABLE WEIGHT FORE END.** Now ready for COLT WOODSMAN PISTOL. Permits adjusting the balance to suit your requirements. Write for details. W. F. Roper, 458 Bridge Street, Springfield, Mass. 4-38

**POSTPAID**—Used oil treated army leather rifle slings, 35¢ each, \$3.25 dozen. Used army holsters for .45 auto or .38 revolver, 75¢ each. 30-06 Gov't. cleaning rods, 50¢. Kiffe Sales Co., 523 Broadway, N. Y. C. 4-38

**10-X ARISTOCRAT Rifle Coats,** were \$8.00, now \$6.50; Super style, were \$6.50, now \$4.90. Postage extra. Kirkwood Bros., Inc., 23 Elm St., Boston, Mass. 4-38

**UNION MOUNTS** for rifle telescopes, moderately priced, bulletin free. Union Auto Specialties Co., Brookville, Pa. 4-38



## BOND TYPE "D"

LOADING PRESS FOR  
.38 & .44 S. & W. SPEC.  
.45 COLT—45 AUTO & RIM

SEND 10c FOR  
CATALOG OF MOULDS  
AND OTHER TOOLS

MODERN-BOND CORP.  
813 W. 5th ST.  
WILMINGTON, DEL.

## THIS SPACE FOR SALE

A display ad of this size measures 14 square lines or one inch. It costs \$14.70 per issue if less than six insertions are used within one year; \$13.30 per issue for six or more insertions in a year; only \$11.90 per month for twelve consecutive insertions. THE AMERICAN RIFLEMAN circulation is now well over 60,000 copies monthly. We will be glad to help you in writing "copy," making "lay-outs," etc. No charge, of course. What is your product?

**HICKORY** Cleaning rods, in Cal. from 22 to .45 by insured mail postpaid, up to 28 in. 50¢, to 40 in. 75¢, over 40, \$1.00. Also Northern Ironwood cured with raw linseed oil in rods upon request. Lorin Granger, Weyerhaeuser, Wisconsin. 4-38

**HAND MADE** Precision .22 Caliber Head Space Gauges. Minimum to Maximum allowance in thousandths. Gunsmiths, Clubs, Cranks, know your gun. Complete set \$7.50. Frank R. Moore, 1502 South 35th Street, Milwaukee, Wisconsin. 5-38

**ROPER'S "GUNSADDLE."** For H&R SPORTSMAN and USRA PISTOL. Provides a real thumbrest, trigger finger support, wide non-rocking "filler" and eliminates trigger slap. Instantly attached and does a real job! Price \$3.00. Walter F. Roper, 458 Bridge Street, Springfield, Mass. 4-38

**STAM** Adjustable Cushion-Rubber Cheek Rest Leather for Scoped Winchester 52, Chuck Rifles. Order now, then wonder why you delayed. \$2.50 postpaid. Circular. Richard Stam, Dale Road, Rochester, N. Y. 4-38

#1 MONOMOUNT, \$3.00. #2 Monomount, \$3.30. Twinmount, \$3.30. Your Keeper's Keeper, \$1.00. Albree, 110 Milk Street, Boston. 4-38

**GENUINE U. S. Army** soft pliable leather sling straps, 1 1/4", new, \$1.00 each. Hudson, R-52 Warren Street, New York. 4-38

**PACHMAYR** Type grip Adapters for Colt & S&W. \$1.00 postpaid. Rifleman's Exchange, 3511 So. Figueroa St., Los Angeles, Calif. 4-38

**NEW Gun rests** for Beavertail fore-end, wide, polished dural, 60¢. Westchester Trading Post, Mount Vernon, N. Y. 4-38

**BEST TARGETS!!!** Lowest Prices!!! 6,000 5-bull 50-ft. Rifle, \$16.75 prepaid 750 miles! Samples 8¢. Zeppelin Arms, Akron, Ohio. 4-38

**FACTORY SECONDS** Recoil Pads \$1.00, postpaid. Complete with screws for attaching. You save \$2.25. Send outline of gun butt. Prompt delivery and satisfaction guaranteed. Inor Mfg. Co., Terminal Bldg., Youngstown, Ohio. 4-38

**LUGER** Accessories, magazines, \$2.75. 32 shot drum magazine interchangeable 9 m/m .30, \$4.25. Holsters 4" or 8", \$1.75. C. C. Tropp Sporting Goods, 225 Lafayette Street, New York. 4-38

## MISCELLANEOUS

**GUNBUGS! ATTENTION!!! OUTDOORS** Magazine is featuring a monthly series of instructive articles on HOME GUNSMITHING. Another series illustrates and gives the histories of the various N.R.A. trophies. These articles in addition to the gun department are edited by Philip B. Sharpe, Life Member of the N.R.A. All American Rifleman readers sending in only ONE DOLLAR will receive OUTDOORS Magazine for the coming full year—twelve copies crammed from buttplate to muzzle with special things of interest to the sportsman. Also at least four back copies containing these articles will be sent to you free of charge WHILE THEY LAST so that you may have them for your files. Clip this ad and mail with \$1.00 to OUTDOORS MAGAZINE, 333 No. Michigan Ave., Chicago, Ill., Dept. N. 4-38

**CANADA, THE RIFLEMAN'S PARADISE.** Its true picture is given you in the pages of ROD AND GUN IN CANADA. Canada's national outdoor-life magazine. Each issue is packed with honest-to-goodness yarns of hunting and fishing in the Dominion, which has it second to none. Real stories that men can appreciate. Fine Gun Department edited by C. S. Landin. PRICE \$1.00 per year. Send 10¢ for Sample Copy. Rod and Gun, 1224 St. Catherine St., W., Montreal, Canada. 4-38

## ANTIQUES & CURIOS

5 PERFECT FLINT ARROWHEADS, 20¢; 4 perfect Flint birdpoints, 20¢. 30 different named minerals, \$1.00. Curios and pistols. Catalog, 5¢. Lemley Curio Store, Northbranch, Kans. 4-38

**WORLD WAR RELIC** for clubhouse or den: Vickers Aircraft Machine Gun, cost Gov't. about \$700 ea., rendered unserviceable, no parts missing; Send M.O., Check or Draft for \$7.75 ea. (F.O.B., N. Y.) \$1.00 deposit on C.O.D. Orders. Free catalog on Fiala Sleeping Bags & Camping Equipment. Fiala Outfits, Inc., 10-a Warren St., New York. 4-38

**ANTIQUE FIREARMS.** Large stock. Send 15¢ for next three large lists. C. Weiss, 2412 Northland Ave., Overland, Missouri. 4-38

**LARGE STOCK** of fine American and European arms. Write us your wants. Send 10¢ coin or stamps for 3rd edition catalog. Kimball Arms Company, 20 Cambridge Road, Woburn, Mass. 4-38

**ANTIQUE FIREARMS.** Specializing in fine U. S. Large selection early Colts. List 10¢. Wm. M. Locke, 1313 Carew Tower, Cincinnati, Ohio. 6-38

**ANTIQUE ARMS** bought, sold, exchanged. Colt or other ivory gripped models, cased outfits, big heavy Colt percussion revolvers and American percussion or flintlock horse pistols particularly desired. Stephen Van Rensselaer, Established 1902, Williamsburg, Va. 7-38

**GENUINE** Revolutionary Flint Musket, Maubeuge, dated 1763, marked U.S. good, \$35.00. Also Bausch & Lomb Binoculars, 6x25, good, \$25.00. George Andrews, 209 Park St., Lewiston, Maine. 4-38

**NEW LIST** of Kentucky Rifles ready April 1. Round ball moulds \$1.60 prepaid. T. J. Cooper, McVeytown, Pa. 4-38

## PATENTS

**PATENTS**—Low cost. Easy terms. Book and information free. Highest reference. L. F. Randolph, Dept. 370, 724 9th St., Washington, D. C. 4-38

**CHESTER TIETIG**, registered patent attorney, formerly chief inspector U. S. Army Ordnance Dept., 309 Mercantile Library Bldg., Cincinnati, Ohio. 12-38

## RECEIVED TOO LATE TO CLASSIFY

**STEVENS** Walnut Hill 417, Lyman 1/4 minute click tang, 17A, excellent, with gun case designed to carry rifle with scope mounted and Winchester A-5 scope, Lyman 1/4 minute click mounts, excellent. Complete \$52.50. WANTED—Colt Woodsman, J. W. Graff, c/o Alabama Power Co., Birmingham, Ala. 4-38

**TRADE**—45 Gov't Auto. All parts new except frame and slide. WANT—38 Special, 5 1/2" Colt Frontier or 1917. Stamp. A. M. Romberger, Cresona, Pa. 4-38



# Shoot in the MATCH OF THE MONTH

**THIS** is your last chance to compete in the current series of N. R. A. gallery postal matches. The February Rifle Match of the Month attracted more than 400 competitors. The April match is over the same course of fire but with metallic sights. Entries will be accepted until April 15. Targets must be returned before April 30.

## RIFLE

**No. 21** The prone metallic sights 50-foot rifle match. You can spread your shooting out over several days but the 100 shots provides enough shooting to determine a real champion. Percentage medals for scores of 990 x 1000, or better.

## PISTOL

**No. 26** The 50-foot pistol championship.—Prove your all around ability with a .22 caliber pistol or revolver by winning this event calling for 10 shots slow fire, 10 shots timed fire and 10 shots rapid fire. Percentage medals for scores of 270 x 300, or better.

## OTHER EVENTS

**No. 22** Metallic sights 50-foot championship rifle match.—20 shots prone, 20 kneeling and 20 standing. (500 x 600)

**No. 23** Tyro 50-foot rifle match.—50 shots prone with metallic sights. Previous medal-winners are barred in this event and competitors shoot only against guns in their own price range. The entry fee is 50¢.

**No. 24** Women's intercollegiate championship.—This event is open only to women undergraduates of any college or university affiliated with the N. R. A. and to undergraduates who are individual members of the N. R. A. The course is 50 shots prone, with metallic sights, at 50 feet (475 x 500). Entry fee is 50¢.

**No. 25** Junior open championship.—The big event of the year for shooters who have not reached their nineteenth birthday. Competitors are classified according to the value of their equipment. The course includes 10 shots prone, 10 sitting, 10 kneeling and 10 standing. The entry fee is only 25¢.

**No. 27** The 20-yard pistol championship.—This is the same course of fire as the pistol "Match of the Month," but is over the longer range. (270 x 300).

**No. 28** Rapid fire 20-yard pistol match.—This event calls for 40 shots rapid fire. (360 x 400)

**No. 29** Life members' pistol match.—Open only to life members of the N. R. A. The course consists of 40 shots, slow fire.

**{ N. R. A. postal matches are open to all individual members of the N. R. A. and members of affiliated clubs. All matches for April—rifle and pistol—are open to .22 caliber arms only. Figures shown in parenthesis thus (360 x 400) are minimum scores required for percentage medals. Entrance fee is \$1.00 unless otherwise noted }**

## USE THIS ENTRY BLANK FOR ENTERING MATCHES

National Rifle Association,  
816 Barr Building,  
Washington, D. C.

Date.....

### GENTLEMEN:

I have put circles around the numbers of the postal matches I would like to enter. Please waste no time in sending my targets. I enclose \$..... to cover my entries at \$1.00 per match (Nos. 23 and 24 are 50c each, No. 25 is 25c).

My Name.....

Address.....

City—State.....

☐ Life Member

☐ Annual Member

☐ Club Member

## Circle the Matches You Want to Enter

### APRIL MATCHES

21\*      22      23

24      25      26\*

27      28      29

\* Indicates a "Match of the Month."



# FEBRUARY WINNERS N. R. A. GALLERY MATCHES

6.

## Any Sights Individual Prone Match at 50 Feet (438 Entries)

	Score
Jacob Birkenbine, Manheim, Penna.	303
Chas. R. Smith, Fort Worth, Texas.	247
G. E. Widger, Ione, Washington.	237
Miralotte Sauer, Winnetka, Illinois.	234
Delmont C. Wiser, Harmony, Penna.	201
C. P. Quidas, Morgantown, West Va.	184
J. I. Davis, Wilkinsburg, Penna.	181
Mrs. W. B. Woodring, Alton, Ill.	173
Frank Britz, Jr., Bryant, Ill.	166
H. P. Schoolfield, Reidsville, N. C.	145
T. S. Rooney, Janesville, Wis.	139
Raymond Ickes, Winnetka, Ill.	121
August Westergaard, Whiting, Iowa.	109
Fred Freidman, Detroit, Mich.	107
Joe Bennett, Morrison, Ill.	105
Carl Wiersema, Morrison, Ill.	104

9.

## Women's Open Individual (55 Entries)

### Expert Group

	Score
1. Alice Murdoch, Ridgewood, Queens, N. Y.	499
2. Sigrid Bergerson, Seattle, Wash.	498
3. Alice H. Buli, Seattle, Wash.	496
4. Mrs. Ivan Waddell, Medford, Oregon.	493
5. Bernice Slind, Fargo, No. Dakota.	491

### Tyro Group

	Score
1. Eleanor Lum, Beaver College, Penna.	498
2. Frances Bryson, So. Jacksonville, Fla.	497
3. Miralotte Sauer, Winnetka, Ill.	497
4. Mrs. Ruth Gates, Fargo, No. Dakota.	495
5. Anita Yeager, University of Maryland.	495
6. Virginia Junkin, Beaver College, Penna.	494
7. Mrs. Helen Kinsella, Dubuque, Iowa.	494

## Get Ready for the Outdoor Season

**N**OW is the time to tune up for the outdoor shooting season which gets under way next month. If local weather conditions do not permit outdoor shooting in your locality this early, you can still enter the final gallery events described on the preceding page.

This year the N. R. A. has worked up an entirely new outdoor program for both rifle and pistol shooters. The schedule will be announced in the May Rifleman. Meantime, we give you another list of indoor match winners—shooters from all over the country who are the “tops” within the various classes and types of competition, as noted.

The following also made possibles and are still firing.

	Score
S. J. Cankey, Topeka, Kansas.	1000
Francis King, Fond du Lac, Wisconsin.	1000
Samuel Kurtz, Lebanon, Penna.	1000
Elmer Ludwick, Wallace, Idaho.	1000
Don Prins, Holland, Michigan.	1000
Roy F. Schwarz, Grosse Pt. Farms, Mich.	1000
A. Stone, Jr., Mare Island, Calif.	1000
D. A. Thimmesch, Fort Dodge, Iowa.	1000

7.

## Individual Standing Free Rifle, Metallic Sights (50 Entries)

	Score
1. R. M. Phelps, Middletown, R. I.	472
2. Herman Prins, Holland, Mich.	466
3. Don Prins, Holland, Mich.	462
4. Howard Nobbs, Jamestown, N. Y.	461
5. W. B. Woodring, Alton, Ill.	460
6. Frank J. Snyder, Phila., Penna.	457
7. Eli G. Cook, Lake Buleah, Wis.	453
8. Russ Kleis, Holland, Mich.	452
9. E. R. Franklin, International Falls, Minn.	452
10. R. E. Strehel, Ridgewood, L. I., N. Y.	447

8.

## Gallery Eagle Rifleman (26 Entries)

	Score
1. Frank Schilling, Lockport, N. Y.	583
2. Ernest Heuer, Wilkinsburg, Penna.	578
3. J. M. Lawson, Wichita, Kansas.	578
4. William Frazier, Rhinelander, Wis.	577
5. Clinton W. Weber, Fairbault, Minn.	576
6. Cortez Souter, Des Moines, Iowa.	576
7. D. Amesbury, Merion Station, Penna.	574

10.

## Timed Fire Pistol Match at 50 Feet (78 Entries)

	Score
1. Leo Allstot, Mason City, Iowa.	397
2. F. Bob Lowe, Los Angeles, Calif.	393
3. L. M. Mansur, Bloomfield, Conn.	392
4. Raymond Douglas, Devils Lake, N. D.	391
5. John Cataldo, Lyons Falls, N. Y.	391
6. R. C. Wild, Cedar Falls, Iowa.	389
7. D. A. Thimmesch, Fort Dodge, Iowa.	389
8. Capt. T. H. Allen, Ft. Benning, Ga.	387
9. Cpl. A. J. King, Ft. Benning, Ga.	386
10. Major J. D. Griffing, Berryville, Va.	386

11.

## Slow Fire Pistol Match at 20 Yards (79 Entries)

	Score
1. F. E. Bates, Worcester, Mass.	376
2. J. H. Chapman, Phila., Penna.	376
3. George B. Young, Buffalo, N. Y.	374
4. Louis Wesson, Chicago, Ill.	370
5. Leo Allstot, Mason City, Iowa.	370
6. C. E. Hollar, Lakewood, Ohio.	369
7. R. S. La Salle, Utica, New York.	367
8. Roy Schwarz, Grosse Pt. Farms, Mich.	367
9. Col. Harvey B. Taylor, Las Vegas, N. M.	366
10. Wm. I. Donahue, Caviota, Calif.	363

30.

## Any Sights Individual Championship at 75 Feet (36 Entries)

	Score
1. Frank J. Snyder, Phila., Penna.	588
2. Charles W. Hasenau, Cleveland, Ohio.	573
3. John B. George, Chicago, Ill.	567
4. L. E. Paegel, Minneapolis, Minn.	567
5. J. M. Bates, Ballston Lake, N. Y.	567
6. E. F. Herzog, Schenectady, N. Y.	566
7. A. O. Dodge, Schenectady, N. Y.	562

LET'S MAKE 1938 ANOTHER BANNER SHOOTING YEAR



# Here today... *here tomorrow?*



Enjoy the sport you love...and enjoy it all the more by thinking of the sportsmen to come. Leave behind you the same abundance of game that gives you such pleasure, by observing the rules of wise conservation.

E. I. DUPONT DE NEMOURS & CO., INC.

*Explosives Department*

SPORTING POWDER DIVISION



WILMINGTON... DELAWARE

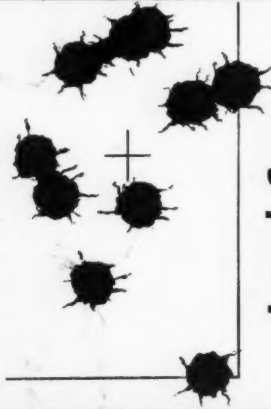
*Member of the American Wildlife Institute*

PRESS OF JUDD & DETWEILER, INC., WASHINGTON, D. C.



# NOW - *Maximum* POWER FOR YOUR RIFLE!

## -and MAXIMUM ACCURACY



### Actual Group Fired at 500 Yards

Here is a sample of WESTERN accuracy — an actual group fired at 500 yards, on March 2, 1938, with WESTERN .300 H. & H. Magnum ammunition in a Mann barrel manufactured by the Winchester Repeating Arms Company. Weather — fair, with variable light wind.

Extreme spread .....	2.10"
Extreme vertical .....	1.20"
Extreme horizontal .....	2.09"
Mean vertical .....	.62"
Mean horizontal .....	1.31"
Mean radius .....	.68"

Have you known there is ammunition that shoots like this? WESTERN World Champion accuracy is built into SUPER-X center-fire cartridges.

WESTERN CARTRIDGE COMPANY



## Western

WORLD'S CHAMPION AMMUNITION

into the highest useful striking energy known to ballistic science.

Maximum velocity means flatter trajectory for long shots at big game. Maximum accuracy is faithful adherence to the WESTERN World Champion accuracy standard. Maximum cleanliness results from non-erosive LUBALOY bullet jackets, clean-burning smokeless powder and non-corrosive primers.

Send for the new folder which gives full particulars with complete specifications and ballistics of all SUPER-X

WESTERN now announces a line of 55 center-fire cartridges in 25 popular calibers to carry the greatest name in ammunition — SUPER-X.

WESTERN'S ability to manufacture super-accurate match ammunition, of which the 500-yard group reproduced here is a sample, has made it possible to achieve *maximum efficiency* in center-fire game loads. All the features essential to superior performance are combined in these new cartridges — *maximum* power, velocity, accuracy, cleanliness.

Open Point Expanding or Soft Point patented LUBALOY bullets of exclusive design, convert the





accuracy is built into SOF EX-A  
center-fire cartridges.

WESTERN CARTRIDGE COMPANY

Open Point Expanding or Soft Point patented  
LUBALOY bullets of exclusive design, convert the

full particulars with complete specifi-  
cations and ballistics of all SUPER-X

WESTERN CARTRIDGE COMPANY  
CARTRIDGE